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JANUARY 11, 1947

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# Railway Age

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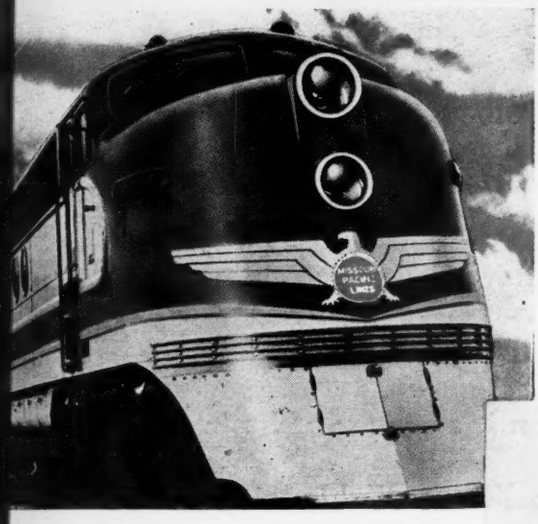
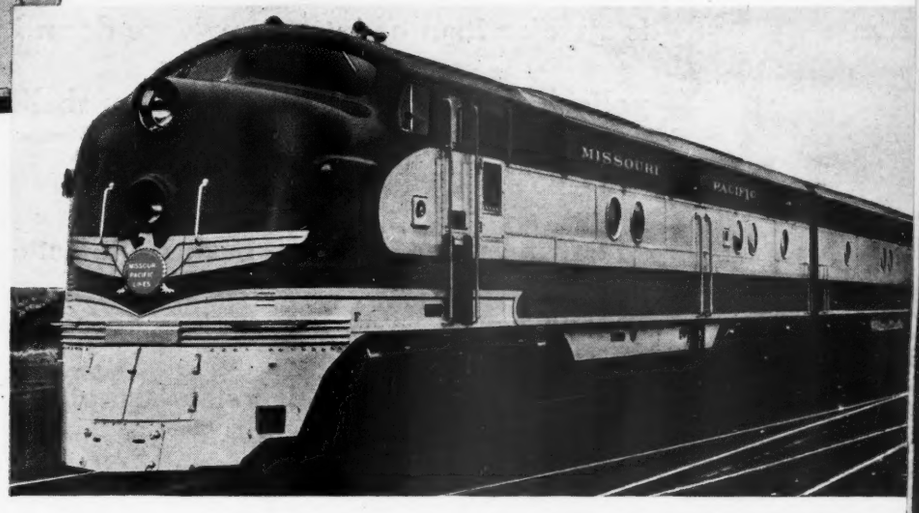
## PARADE OF THE VETERANS



# 2,595,044 Miles — Availability 97.3% — Since October, 1941




THE two "Colorado Eagles" of the Missouri Pacific, each making a daily run of 1,021 miles between St. Louis and Denver, have amassed a running and availability record worthy of illumination.

Hauling these two trains from October, 1941, to July 31, 1946, latest reporting date, the two General Motors Diesel locomotives have rolled up a total of 2,595,044 miles, with a high availability of 97.3%. This is a particularly brilliant record over such a long period and with such long mileage.

So the two "Colorado Eagle" Diesels, like many companion General Motors Diesel locomotives, are real veterans in performance—and obviously youthful in staying power. Not to mention remarkably low-cost operation and maintenance.

Here, then, is another demonstration of one big feature offered by General Motors Diesels —*outstanding actual records.* It is more proof of substantial engineering, and points up the advantage of concentrating solely on Diesel locomotives in the most modern plant of its kind.

YOUTHFUL IN STAYING POWER

GENERAL MOTORS LOCOMOTIVES

VETERANS IN PERFORMANCE

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS — LA GRANGE, ILL.

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## A STATEMENT OF POLICY

**The economic problems faced by the American Railroads today make it a matter of urgent necessity that every proven device which makes for greater operating efficiency, safety and economy, can and must be made available to all for the common good.**

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**UNIT TRUCK CORPORATION - - - NEW YORK**



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★

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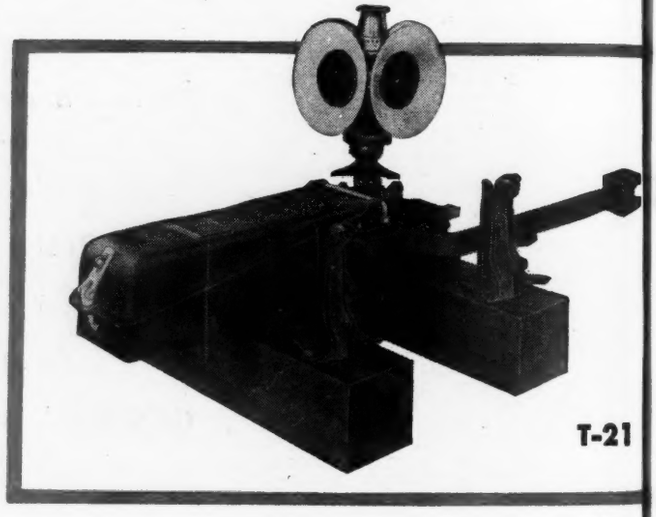
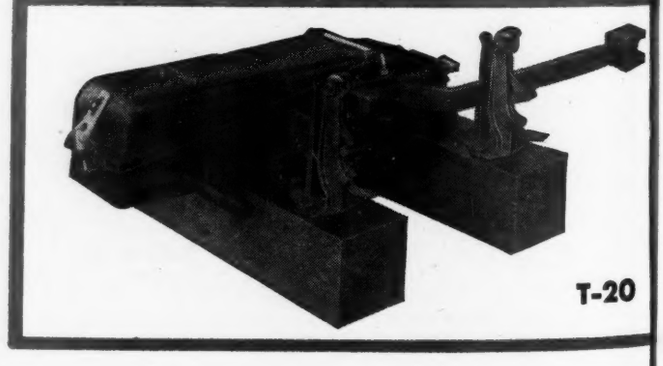


T-21



T-20

UNION SWITCH & SIGNAL COMPANY

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NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

RAILWAY AGE

# A Time of Decision

This year and next promise to be momentous for the railroads. The recent rate increase and an accumulation of war-time earnings give them the opportunity to initiate what may well be the largest program of improvements in which they have ever engaged. Also in this period will probably be decided once and for all whether the railroad industry can put behind it the specter of socialization—which hovers over every indispensable enterprise which cannot establish itself as a sufficiently dependable earner of net income to attract a continuing supply of new capital adequate to its needs.

## Great Events Move Swiftly

The great decisions of history have a way of being compressed into small capsules of time, as happened when, in the third century B. C., the invading army of Hannibal was put to rout at the very gates of Rome; or when the Huns in 451 A. D. were turned back at the Rhine. Men who chanced to be placed in time and space to permit their participation in these events were able to determine, not only their own future and that of their children, but also that of civilization itself, and not just for centuries but for millennia to come.

It looks very much as if one of these brief but intensely critical historical periods is now upon us, and that the scene of action is this country. Free economic and political life is now making here its last-ditch stand in a world which elsewhere has largely succumbed to the domination of bureaucratic tyranny. The process had also gone far with us, but has been at least temporarily arrested with the overthrow of the New Deal. It now remains to be seen whether the elements favorable to freedom can take effective advantage of the respite they have been given to convert themselves, once more, into an aggressive force, with some hope of recovering the ground they have steadily lost over the past half-century and especially during the period since the first World War.

There are plenty of promising signs that American business leadership, in general, has awakened to the importance of the time and of its opportunity, which quite likely may be its last one. In these circumstances the railroads are confronted with the important task of selecting a new chief executive for the Association of American Railroads. What are the duties and opportunities of this association and its leadership at the present juncture of time and events? Will the major job of the association in the period ahead lie in the field of operation, car service, engineering standards—or, perhaps, in the broader realm commonly known as public relations, which embraces the establishment of reasonable rates and regulation and tolerable conditions of competition and dealings with labor?

The times are, if anything, more critical for private enterprise in transportation, especially in railroading, than for the other segments of the economy. With the British railroads on the verge of succumbing to socialism, there will soon not be any non-governmental railroads left, of any importance, except those of North America. And the railroads here have not for 17 years, except during the war, had sufficient earnings to support them as vigorous and self-sustaining private enterprise. If they cannot now, with a high level of national production and income and under a government friendly to private business, definitely win for themselves stable conditions of equitable competition, labor relations, and regulation, assuring earnings which will make the industry once more highly attractive to "venture capital," then it is unlikely that they can ever hope to regain the status of healthy private enterprise. It is a clear case of now or never.

## Railroads Need Outspoken Leaders

Railroad service commensurate with the needs of industry and agriculture is indispensable to a modern nation, as a matter of very existence. If the capital funds necessary to provide such service cannot be obtained from the voluntary action of uncoerced investors, then the requisite investment must be secured by coercion, i. e., by taxation—which means either partial or complete government ownership and operation. The railroads limped along through the 'Thirties with inadequate earnings and new investment because of (1) the widespread depression in general business, especially in the capital goods industries, and (2) inequitable partisanship by government in behalf of the railroads'

competitors, patrons, and organized employees. The first of these factors in the railroads' financial anemia has been removed but the second has not.

All this means that the railroads stand in even greater need of competent and spirited expounders and defenders of the principles of economic freedom necessary to enable them to survive as independent business than does industry in general. Indeed, it is quite conceivable that business in general might succeed in arousing sufficient popular and political support to enable it to thrive, at least for a time, under private ownership—without guaranteeing any such opportunity to the railroads.

The framework of law in which the railroads operate has been so separated from that surrounding the rest of business that it has become possible—and, indeed, a frequent occurrence—for politics to injure the railroads at the same time that it favors other business. Let it be recalled, for example, that the very same Congress which late last summer supported the Case bill for withdrawing some of the harmful immunities extended to organized labor in general also enacted the Crosser bill, extending heretofore unheard-of special privileges in the way of "social security" to railroad employees.

### Opportunity for Statesmanship

The railroads must be heartened by the activities of the National Association of Manufacturers, the Chamber of Commerce of the United States, and the Committee for Economic Development and other such organizations in their educational work in behalf of free enterprise—because economic freedom certainly cannot survive in transportation unless private business in general is given an opportunity to thrive. At the same time, the success of the efforts of these organizations of general business will, alone, afford no guarantee whatever of survival of free enterprise in transportation, because this industry has *special problems* of a political nature which the N. A. M., C. of C., and C. E. D. are afraid even to mention in their educational literature lest they stir up internal dissension within their own organizations. Many of the country's most outspoken and effective defenders of the principles of free enterprise for business in general are, at the same time, convinced and active socialists as far as transportation is concerned.

The occasion calls for far-seeing statesmanship on the part of the leaders of the railroad industry, able to arouse other business, organized labor, and the public generally to a realization of *their* interest in a thriving and self-sustaining railroad industry—and to the adoption of the means necessary to that end. It is unfortunate that Judge Fletcher, who has accepted the presidency of the A. A. R., does not feel that he can long permit himself to retain this position of leadership, because the preëminent integrity, wisdom, tact and understanding of political and human relations which are his are certainly foremost among the qualities needed for leadership of the railways through this critical period. There are, however, younger men in the industry who have most or all of the qualifications for leadership, and it should not be impossible to get some one of them to assume its difficult duties and responsibilities when Judge Fletcher decides he is no longer equal to them.

## Too Many Locomotive Failures

Generally speaking, miles per locomotive failure increased slightly for steam power and decreased about as much for Diesel power on most roads in 1946, compared with 1945. Locomotives, both steam and Diesel, frequently average up to 100,000 miles, and sometimes substantially more, between failures which cause train delays. Nevertheless, an even better record is desirable, because reliable, on-time service is one of the best means of pleasing the public and surpassing the competition by land, water, or air.

This point was admirably brought out in a discussion of locomotive failures, both steam and Diesel, at the regular monthly meeting of the Southern & Southwestern Railway Club at Atlanta, Ga., last September. The members got down to cases, mentioning the specific parts of locomotives which are giving them the most trouble and suggesting means for minimizing breakdowns.

For example, it was stated that boiler failures, primarily due to bad water conditions, have been greatly reduced but are still too frequent; in many instances they are caused by cinder cutting. Failures occur daily due to the development of defects in wheels and axles, rods, crank pins, valve gear parts, journal bearings, lubricating devices, air brake equipment, piping, etc.

All these are classified as failures of materials, but back of them are man-failures in some detail of design, manufacture, inspection or maintenance practices. The root of reliable steam locomotive operation is well said to be thorough, competent inspection and repair work at enginehouses, accompanied by uncensored reports regarding which parts failed, why, and who was responsible. Backing up the enginehouse must be a well-equipped back shop that maintains equipment standards and removes parts after a reasonable service life in order to guard against fatigue failures. The test department, with qualified personnel and a full complement of modern equipment, has the vital responsibility of checking materials to see that they are up to specifications and of determining the reasons for failures when they occur.

Diesel locomotives present a somewhat different situation in that this type of power is relatively new and strict adherence to the manufacturers' recommended periodic maintenance procedure will generally hold failures to a minimum. Adequate lubrication is also of surpassing importance. Some of the causes of lube-oil failures, mentioned at the Atlanta meeting, include filters not properly seated; foreign matter in piston-cooling tubes; dirty oil screens; loose oil lines; water leaks at lower cylinder liner seals; dirty oil coolers; loose connecting-rod straps which cause loss of oil pressure and crank shaft failures.

Electrical failures also occur with Diesel motive power and are generally caused by careless maintenance. Some of the things which need close periodic attention include adjustment of contacts in the throttle stand; electro-pneumatic contacts and power cut-off switches; unit switch and reverser interlocks; generator and motor brushes, shunts, and the like.

In addition, it was brought out at the meeting that

Diesel locomotive failures are caused by overloading, with resultant excessive temperatures, cracked heads and pistons, over-expanded gaskets and loss of oil pressure. The operation of Diesel locomotives while the engines are still cold is almost equally harmful and rough handling has caused many ring gear failures.

Reduction in the number of locomotive failures is, therefore, not exclusively the responsibility of the mechanical department. Full cooperation of all those interested and a more adequate and uniform method of recording failures and analyzing their causes should yield improved results.

## Concrete Gets a Rap

Of all the materials used by the railways, few have proved more baffling or costly in their shortcomings than concrete. With its many advantages, this material is indispensable to many types of railway construction and maintenance, but accumulating records of failures and high repair costs indicate that much of the concrete placed in the past is indefensible.

Nowhere has this fact been brought to light more clearly than in the report on Methods of Improving the Strength, Durability and Wear-Resistance of Concrete presented by a committee before the recent annual meeting of the American Railway Bridge & Building Association, which cites figures—in some cases no less than amazing—of the large expense to which a number of roads are being put to repair concrete which, according to the report, "was originally thought to be practically indestructible."

One large railroad, the report says, estimates that it has spent $3 million during the last five years to repair and replace disintegrated concrete, and that an expenditure of an additional $1 million will be required for similar work within the next five years. Another road with less mileage estimates that an expenditure of $200,000 will be required in the next five years, while a third road has already spent $300,000 to repair concrete grade separation structures in one city alone.

As if these statements were not enough to establish the seriousness of the situation, the report continues with more and equally startling figures, squashes the thought that the concrete referred to was placed under other than the most rigorous specifications and supervision, and says that "We are perturbed to see some concrete, placed by rule-of-thumb by unskilled workmen in unfavorable locations, outlast concrete placed more recently under present-day rigid specifications." Engineers and construction men generally might well be perturbed.

While the committee recognized the existence of possible shortcomings in any one of the various materials making up concrete and of almost innumerable opportunities for something to go wrong while concrete is being mixed, placed and cured, it was far from satisfied that the best possible concrete has been secured in many instances. At the same time, that it was convinced that good concrete can be procured, if demanded, is seen in its suggestion that, in addition to calling for a "definite strength" concrete, which is common practice, specifications should call for a "definite life" concrete. "The one who furnishes the money for the construction," it said, "is entitled to know the life of the concrete he is going to get. Perhaps 20-year concrete is all he wants. However, if he wants 50-year concrete, he should know that he is going to get it, and what it will cost."

Because of the long span of years involved, such a "guarantee" clause would appear to be impracticable in most concrete construction contracts, and could not be made a factor in the large amount of concrete placed by the railways with their own labor forces. However, its proposal indicates the seriousness with which many view the problem, and should make it abundantly clear that at least some railway engineers are plenty mad about much of the concrete foisted on them in the past, and are prepared to insist upon better materials and workmanship in the future.

## Using Long Turnouts

To secure the results for which long turnouts and crossovers are installed, a proper range of signal aspects must be provided so that enginemen can, with confidence, bring their trains up to and through such turnouts at the speeds for which they are designed. Disregarding this consideration, one railroad went to the expense of installing a long crossover in an interlocking with the intention of saving train time by permitting diverging moves at medium speed, but made no appropriation for additional aspects on the distant signals.

Under these conditions, if the route is lined for a diverging route over the crossover, the home signal displays a Medium-Clear aspect and the distant signal an Approach aspect. This latter aspect indicates "Proceed, preparing to stop at next signal; train exceeding medium speed must at once reduce to that speed." This aspect and indication govern the approach to a signal which will require an engineman to stop his train or operate at a slow speed. Therefore, he must approach the home signal prepared to stop short of it. A result in most such instances is that, by the time the engineman observes the Medium-Clear aspect on the home signal, the speed has already been reduced and the train drags on through the crossover at this low speed, thereby losing considerable time compared with the speed for which the crossover is designed.

On the other hand, under similar circumstances on another railroad, appropriations for installing new long turnouts and crossovers in interlockings and at sidings in centralized traffic control territory have included funds also for proper signaling to permit the use of these new track facilities efficiently. For example, each distant signal is arranged to display the Approach-Medium aspect when the home signal displays the Medium-Clear, and, therefore, an engineman can bring his train up to and through a long crossover or turnout at the speed for which it is designed, thus deriving the benefit for which the railroad spent good money.

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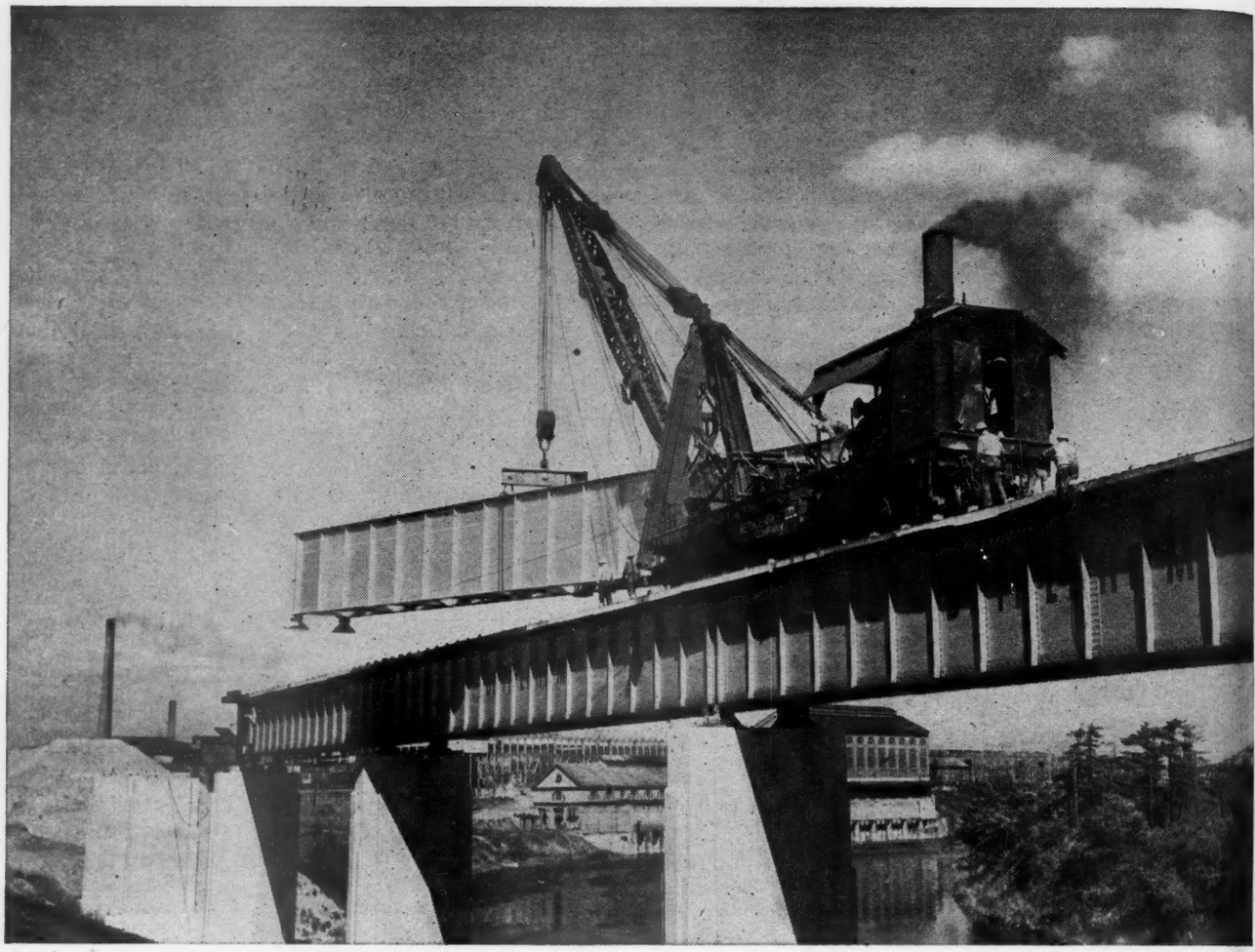
*No bunch of big brains in Washington can ever save the rest of us from the consequences of our own economic misdeeds.*—Paul G. Hoffman, chairman, Committee for Economic Development.



**Setting the 100-ft. all-aluminum span, completely assembled, with a single 30-ton erecting crane**

# *All-Aluminum Bridge Span Makes Debut*

**Single-track deck plate-girder unit, 100 ft. long, on Massena Terminal, designed for Cooper's E-60 loading, weighs only 53,000 lb. and was shipped assembled and set with one crane**

AN important advance in the use of structural aluminum was made recently when an all-aluminum bridge span for railroad loadings, the first of its kind in history, was installed in the crossing of the Massena Terminal Railroad over the Grasse river at Massena, N. Y. The aluminum span, one of seven deck plate-girder spans which make up the new bridge, is 100 ft. long; the other six spans are of steel, two being 75 ft. long, one 90 ft. long, and three 100 ft. long. The 100-ft. aluminum span weighs only 53,000 lb., compared with 128,000 lb. for the steel spans of the same length.

The Massena Terminal is a single-track switching and terminal railroad about two miles long. Crossing both the Raquette and the Grasse rivers, it connects the New York Central and the Canadian National with the industrial district of Massena, serving especially the Aluminum Company's Massena works. Its motive power consists of three 600-660-hp. Diesel-electric locomotives. At present the road's traffic is entirely freight, although passenger trains may be operated over the line in the future.

The new bridge is part of a major improvement program undertaken by the railroad. The original bridge, built in 1897 and designed for Cooper's E-38 loading, consisted of two deck plate-girder spans 50 ft. long and four Warren deck truss spans 100 ft. long. Because of the increasing weight of cars and locomotives, it became imperative to replace this bridge with a stronger structure. Accordingly, the new bridge was designed for Cooper's E-60 loading under the specifications for steel railway bridges of the American Railway Engineering Association.

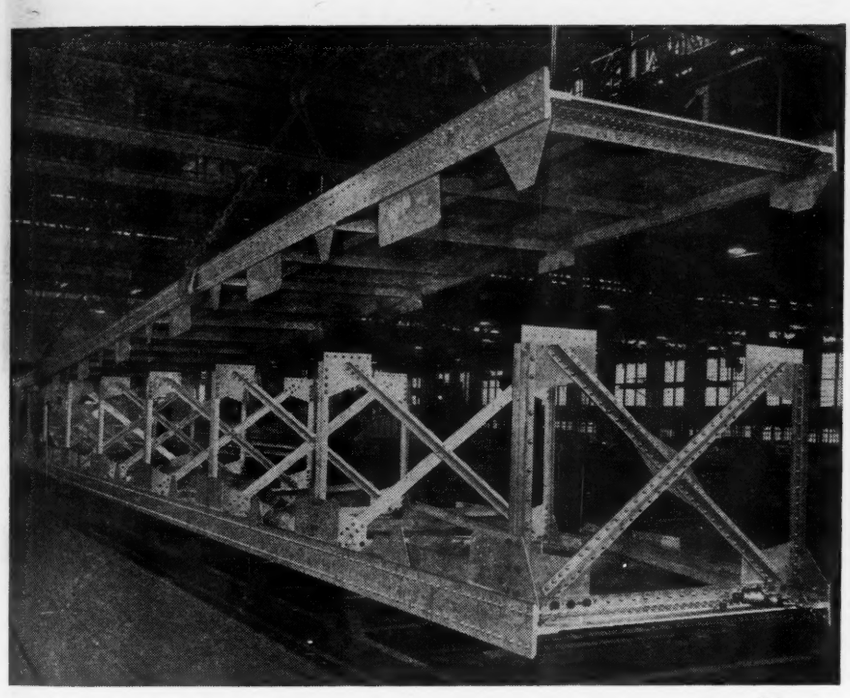
The aluminum span is constructed entirely of aluminum alloy. The particular alloy selected for all parts of the span, except rivets, was 14S-T, which contains 4.4 per cent copper, 0.8 per cent silicon, 0.8 per cent manganese, and 0.4 per cent magnesium, the balance being

aluminum. For more than 25 years this alloy has been used for heavy-duty forgings; it has also given outstanding performance in very large civilian and military planes and in the floor systems of M4 pontoon bridges. It was selected as the material for the aluminum span because of its high strength; good resistance to atmospheric corrosion; adaptability to the manufacture of large plates, rolled shapes and extruded sections; and working characteristics well suited to standard fabricating practices.

Aluminum alloy 14S-T has the following typical mechanical properties: Ultimate tensile strength—70,000 lb. per sq. in.; tensile yield strength (set 0.2 per cent)—60,000 lb. per sq. in.; elongation in 2 in. (½ in. diameter specimen) —13 per cent; Brinell hardness (500-kg. load, 10-mm. ball) —135; shearing strength—42,000 lb. per sq. in.; and modulus of elasticity—10,600,000 lb. per sq. in. The guaranteed minimum yield strength for both 14S-T plate and shapes is 53,000 lb. per sq. in.

All plate used in the span was Alclad 14S-T, which is a composite material having a core of alloy 14S and surface layers of a different aluminum alloy. The purpose of the surface layer, which is rolled onto both sides of the 14S core, is to increase still further the natural resistance to corrosion of the 14S-T plate.

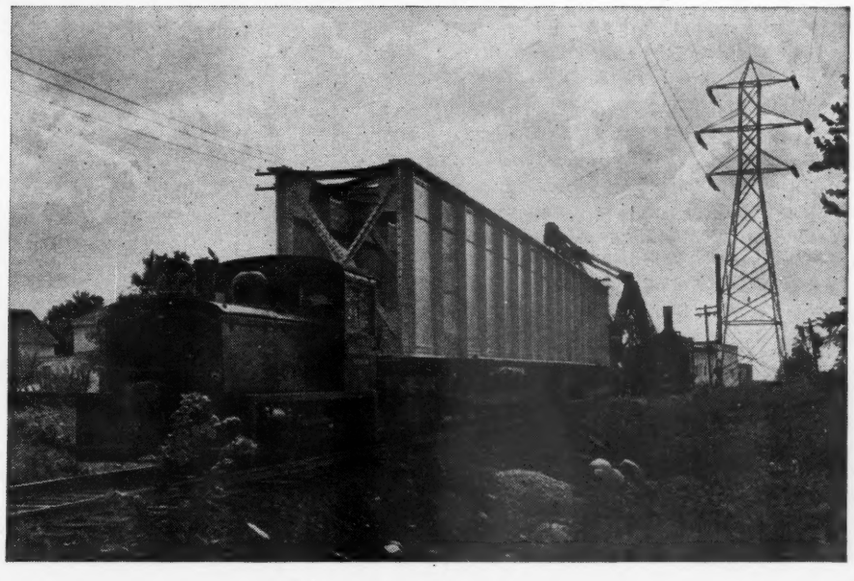
The rivets used in the span are primarily ⅞ in. in diameter and are made of alloy A17S-T, which contains 2.5 per cent copper and 0.3 per cent magnesium, with the balance aluminum. Alloy A17S-T rivets were used wherever it



**In the shop assembly of the aluminum girders, all of the heavy riveting was done with an 80-ton capacity horseshoe-type squeeze riveter**

**Lowering one of the girders into position to complete the shop assembly of the all-aluminum span**

**The completely-assembled girder span was shipped as a unit from the Rankin (Pa.) plant of the Bethlehem Steel Company**



was possible to drive rivets with a squeeze-type riveter. These rivets, driven cold, provide an ultimate shearing strength of about 33,000 lb. per sq. in. In those places requiring the use of pneumatic hammers, however, alloy 53S-W rivets were used. This alloy, in addition to aluminum, contains 1.3 per cent magnesium, 0.7 per cent silicon, and 0.25 per cent chromium. Alloy 53S-W rivets, driven hot, give an ultimate shearing strength of about 24,000 lb. per sq. in.

The aluminum span consists of two plate girders approximately 10 ft. deep and 100 ft. long. The web plate of each girder is 10 ft. wide and ¾ in. thick, and is in four sections, each approximately 25 ft. long. The flange angles, 8 in. by 6 in. by ⅝ in., as well as the T-sections used for lateral bracing, were extruded. The web stiffeners and crossframes, of 5-in. by 3½-in. and 4-in. by 3-in. angles, respectively, as well as the flat bar stock filler strips for the web stiffener angles, were rolled. The cover plates—two top and two bottom—are of ⅝-in. by 14-in. material in lengths up to about 62 ft., and were also rolled. To give uniform bearing for the track ties and to increase the strength over web and flange splices, the two top cover plates extend the full length of the girder; one bottom cover plate is full length, while the other extends over only the center third of the span.

## No Fabrication Problems

The Bethlehem Steel Company, which fabricated the aluminum, was able to do so without difficulty, using the standard tools and equipment generally used for steel fabrication, with one exception. This exception was an electrically-heated, air-type furnace to heat the alloy 53S-W rivets. Most of the pieces supplied to Bethlehem by the Aluminum Company were in the required lengths and widths, so that the only sizing operations necessary were the milling of the ends of the shapes and filler pieces, and the edge planing of the web plates. The gusset plates, however, were an exception, since they were supplied in rectangular forms that had to be sheared to shape.

In the fabrication of the span, all holes in aluminum plates or shapes ½ in. or more in thickness were drilled, while thinner parts were punched. The stiffener angles and the angles in the crossframes, which were less than ½ in. thick, were sub-punched to 11/16-in. diameter on a multiple-punching machine. The gusset plates were likewise sub-punched on a detail punch. Rivet holes in all material ½ in. or more in thickness were sub-drilled, using 11/16-in. diameter, two-fluted spiral twist drills. These drills were operated at a speed of 300 r.p.m., with a feed of about 3½ in. per min. Water was used as a coolant.

After the drilling operations on the web plates, the plates were edge planed. The ends of the assembled end stiffener angles and the ends of the flange angles were milled on the same piece of equipment without a lubricant.

## Assembly Methods

When the various components had been sized, the assembly of the girders was started. The first step was to bolt the flange angles together against spreaders measuring 51/64 in. thick, thus leaving a void 3/64 in. in excess of the nominal thickness of the ¾-in. web plate. The cover plates were then applied to the flange angles. All faying surfaces were cleaned with mineral spirits and coated with Alumilastic, an aluminum pigmented calking compound of brushing consistency, with zinc chromate added. The cover plates were carefully fitted by hand to insure complete bearing.

The reaming of the rivet holes was accomplished in two operations. After the pieces had been assembled the alinement of holes was gained by first passing a five-fluted reamer of 11/16 in. diameter; second, a similar 57/64-in. reamer was passed to finish the operation. All rivets in the flange assemblies were ⅞ in. in diameter and of alloy A17S-T, driven cold with an 80-ton capacity horseshoe-type squeeze riveter. This equipment was also used to rivet, in like manner, the flange assemblies and the stiffener angles to the web plates. A stationary horseshoe-type riveter was used to drive cold the ⅞-in. A17S-T rivets into the crossframes. The rivets in the lateral and diagonal bracing were driven with a small 50-ton capacity horseshoe-type squeeze riveter. Hot-driven alloy 53S-W rivets were used to connect the gussets of the crossframes to the inside vertical stiffener angles of the girders. These rivets were driven at a temperature of 1,050 deg. F.

Upon completion of one top and one bottom flange assembly, work was started on the "fitting-up" or assembly of the first girder, which was identified in the shop by the notation G-1. At the same time, the flange assemblies for girder G-2 were fabricated, so they would be ready for fitting-up upon completion of that operation on G-1. The first step in the fitting-up of the girder was the laying of a 1¼-in. camber in the lower flange. After inserting the four web plates, the web splice plates and the stiffener angles were fitted into place. The final girder assembly operation was the lowering into place of the top flange. All faying surfaces were thoroughly coated with brushing grade Alumilastic, to which zinc chromate had been added.

Following the complete fabrication of the two girders, girder G-1 was laid on its side and the crossframes were fitted to the inside stiffener angles. Girder G-2 was then lowered into place, after which the lateral bracing was fitted into place. After the span was completely fabricated, it was cleaned with a 1-to-3 solution of Deoxidine No. 126 in water, and then brush painted with a prime coat of zinc chromate paint. Following this prime coat the span was given two coats of aluminum paint. The steel spans of the bridge were painted with one coat of red lead and two coats of aluminum paint.

To observe the long-time effect of weathering on the aluminum components, a six-foot panel at the north end of one girder, located between two vertical stiffeners, was left bare of all surface paint and will remain this way permanently.

## Shipped and Erected as Unit

The light weight of the material used in the aluminum span made possible the complete shop assembly of this span, thus eliminating all field assembly or riveting. The completely assembled span was shipped on flat cars from the point of fabrication to Massena, and was set in place on the piers by a 30-ton locomotive erection crane. This same crane could handle only a single girder of the steel spans of the same length. After both steel girders in each of the other spans had been set in place, the crossframes and laterals were set and riveted by crews working over the river on swinging scaffolds.

The aluminum span was designed by the Aluminum Company of America, which also supplied the material. The design was reviewed and checked by the firm of Hardesty & Hanover, New York, while the fabrication and erection of the span, as already indicated, were done by the Bethlehem Steel Company at its Rankin (Pa.) works. Fabrication of the steel spans was also carried out at Bethlehem's Rankin works. The steel spans, as well as the piers, were designed by C. E. Smith & Co., St. Louis, Mo., while the Harrison Construction Company, Pittsburgh, Pa., was the general contractor.

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B. & M. Contest Winners Get Prizes.—Twenty-four winners of the Boston & Maine's recent coach-naming contest were treated to a weekend in Boston as a combination prize and Christmas present. The 15 girl and 9 boy winners, accompanied by their mothers or other suitable chaperones and representing the states of Massachusetts, New Hampshire, Vermont and Maine, were given a banquet, box seats at the opening performance of an ice show, and a historical trip about Boston, as guests of the railroad. A more lasting thrill to the youngsters is the fact that the name and address of each will be inscribed on a plate to be attached to the new coach he or she named.

# House Group Reports on Transport Survey

**Transportation subcommittee of committee on interstate and foreign commerce tells of work thus far on "national transportation inquiry" and summarizes views of interested parties**

WASHINGTON, D. C.

PRESENTATIONS received by the transportation subcommittee of the House committee on interstate and foreign commerce, in connection with the "national transportation inquiry" it launched more than a year ago, indicate that interested parties are "overwhelmingly against" federal aid to transportation agencies or governmental promotion of common-carrier services, while they are "overwhelmingly in favor" of exempting regulated common carriers from the anti-trust laws and "largely in favor" of a single regulatory agency with jurisdiction over all forms of transport. Meanwhile, the respondents were in general agreement that the national transportation policy is "both sound and reasonable," complaints in that connection being directed to administration.

Opinion was "about evenly divided" on the matter of reorganizing the Interstate Commerce Commission and "strongly in favor" of voluntary coordination of services, although opposed to compulsory coordination. On the controversial matter of "integration," i. e., common ownership and operation of carriers of different types, the users of transportation were about evenly divided, with 51 per cent of those who expressed an opinion on the subject in favor and 49 per cent against. Most of the "in favor" group, however, asserted that "integration" should never be permitted to result in monopoly.

These and other composite views of respondents are set out in a report made public last week by the subcommittee which has been conducting the inquiry pursuant to the resolution (H. Res. 318, 79th Cong., 1st sess.) passed in 1945 under the sponsorship of the committee's retiring chairman—Representative Lea, Democrat of California. The change in control of the House will result in a Republican, presumably Representative Wolverton of New Jersey, becoming chairman of the committee.

## 472-Page Report

Meanwhile, however, the report, dated December 16, was submitted by Mr. Lea, who has also been chairman of the transportation subcommittee. It is a two-part document of 472 pages, with Part I (271 pages) including a foreword by Mr. Lea, a summary setting out the composite views of the respondents, and a brief statement of the subcommittee's "conclusions," which makes no recommendations but suggests a series of public hearings on what the subcommittee regards as the most significant problems pointed up by the presentations. Finally, they are abstracts of the responses which comprise the greater part of the volume.

Part II is "A Bibliography and Summary of Views on the Transportation Problems Listed in the National Transportation Inquiry," which was prepared by the staff of the Bureau of Transport Economics and Statistics of the I. C. C. Part II's foreword by Director W. H. S. Stevens of the I. C. C. bureau emphasized that text summaries in the bibliography "are merely digests by the bureau of the various views and opinions which are contained in the publications listed"; and "every effort has been made to avoid either any expression of opinion regarding the statements involved or any evaluation thereof."

## Four Major Questions

The presentations received by the subcommittee came in response to the questionnaire ("list of suggested topics") it sent out in August, 1945. The report reveals that as of November 15, 1946, the subcommittee had received 492 statements, of which 442 were "usable," 50 being "far too general in content." Respondents included 124 shippers; 83 carriers; 98 "miscellaneous" individuals; 48 local "trade associations," including 28 representing shippers and 20 carrier groups; 25 national "trade associations," including 14 representing shippers and 11 carrier groups; 33 "miscellaneous organizations"; 29 chambers of commerce; 28 individual attorneys or I. C. C. practitioners; 6 government departments; 9 state commissions; and 9 publications. The committee did not make the responses public, but several of the respondents released their own presentations, many of which were reported in *Railway Age*.

Among those receiving the questionnaire were several members of the *Railway Age* editorial staff, and their joint reply was published in the issue of December 1, 1945, page 892. The presentation of the Association of American Railroads was reported in the issue of June 29, 1946, page 1268.

The problems which the subcommittee found standing out as "most significant" are stated in the report as follows:

1. Whether or not the regulation of all common-carrier forms of transportation should be centralized in the Interstate Commerce Commission either as presently organized or under a reorganization. This question might well be considered under two heads: (a) For domestic carriers, (b) for combined domestic and foreign carriers.
2. The wisdom of control and operation of one form of carrier by another and, if permitted at all, under what circumstances and conditions. This is familiarly known as integration.
3. Whether, under present competitive conditions, the federal government is warranted in continuing the promotion of one or more types of common carriers but not of others, and in granting aid to certain types but not to others, except on a self-liquidating basis.
4. The exemption of common carriers from the application of the anti-trust statutes where the activities in question are under the supervision of the federal regulatory agency.
5. Whether the present regulatory bodies, working within the framework of existing statutory authority, can be deemed to have sufficient scope and to have developed administrative practices adequate to deal with the rapid movements of economic events; and the results of actions by other government agencies over which they have no control but which act without reference to carrier revenue needs.

The latter problem, the subcommittee called "particularly important when one considers the financial position of all carriers today and the need for their building up reserves, attracting private capital, and maintaining their properties in proper condition so that services and employment may be maintained during periods of depression." Likewise did the report call the problem of exempting carriers from the anti-trust laws a "very important one," but it added that the matter might not require extensive further investigation in view of last year's Senate and House hearings on the Bulwinkle bill which failed of enactment. Meanwhile the subcommittee noted that none of the five problems listed is "particularly new," but "they are all disturbing at this time, either to the transportation industry as a whole or to particular segments of it."

"They are," the report also said, "all matters of national transportation policy, as distinct from matters of management,

and as such demand thorough investigation in order to dispel present uncertainties. Either legislative action is soon needed to conclusively settle all uncertainties or a definite decision should be reached that these are not as great problems as they seem and can be solved without legislation at this time. . . .

"Because of the nature of the survey, with statements being filed by interested parties without any knowledge of what someone else might be saying on the same subject, and because of the narrow margin of opinion one way or the other on several controversial points, the subcommittee has obviously not yet reached the point where it can take a position on any of the above or other topics. It continues as a neutral, fact-finding body until all parties have had an opportunity to discover what others have said on the subjects in which they are most interested. This is the chief reason for the publication of this report, and it is hoped that it will serve to bring forth any conflicting opinions and add further information.

"The next step in developing possible legislative proposals in line with a national policy fair to all competing agencies of transportation, to the using and investing public, and to labor, would be the holding of a series of hearings on the above or additional topics, in order to give all interested parties a chance to be heard and to present the subcommittee and others with an opportunity for cross-examination, something not possible when information is obtained on the basis of written statements."

## Lea Statement

Chairman Lea's foreword sketched briefly the subcommittee's progress on the inquiry, noting that the work of abstracting the presentations for inclusion in the report had been done by the subcommittee's consultant—Dr. John H. Frederick, professor of transportation at the University of Maryland. As Mr. Lea explained, the report did not attempt to reproduce the full text of the presentations, Dr. Frederick having "selected quotations from typical statements as to all subjects discussed and assembled them separately under the various subjects in the order set forth in the list of suggested topics."

"The problems of transportation," Mr. Lea went on, "might generally be said to be of three different types: (1) Those that call for legislative treatment or remedy; (2) problems of administrative character growing out of legislative authority; and (3) problems of management and ownership.

"Manifestly our transportation agencies have many problems outside of governmental functions or responsibilities. These are distinctly the problems of ownership and management, many of which spring out of economic conditions over which management itself has little if any control. It is only legislative and administrative problems that are within the responsibility of Congress and which relate to the work of this committee.

"The work of assembling and compiling this report covers only a preliminary step of this transportation survey. The study and utilization of this information and recommendations are matters for further action by the committee and perhaps later for consideration by Congress. In effect, we have before us a presentation of problems and difficulties of the government in reference to its regulatory duties and also of our various transportation agencies as presented by men experienced as to these problems. We have also the benefit of their recommendations as to what should or should not be done.

## Preventative Action Needed

"Some of our public carriers are threatened with conditions similar to those which beset common carrier services in the 'Thirties. Part of this situation is due to abnormal conditions growing out of the war. But in this situation there is a warning. All possible should be done to avoid such developments in advance rather than wait until the country has suffered a full dislocation that the return of such conditions might inflict.

"All our transportation agencies are engaged in useful and necessary work. Their services constitute a basic industry of the nation. Government regulation is designed to be a constructive aid to the public and to the carriers. The broad purpose of regulation should be that of the government giving its strength by helpful interest in securing good services and fair treatment to the public, just and reasonable regulation of the carriers, and maintaining fair competition between what are now our numerous competing agencies.

"The welfare of our transportation system should be a matter of first concern to the nation. Our government is firmly committed to a policy of service transportation based on privately owned and publicly regulated transportation. Under this policy we have a transportation system capable of great public service and practical utility. We must continue the success of this policy as a part of our system of free enterprise. We must, if possible, improve our regulatory system and adapt it to the markedly changed competitive conditions that have arisen during the last 25 years. It is recognized that many of these problems are controversial and difficult of solution. They are for that reason no less important. They well deserve the most earnest attention of the committee and the Congress."

The report's summary setting out the composite views of interested parties with respect to various subjects listed in the subcommittee's questionnaire was as follows:

**1. National Transportation Policy**—There is no doubt that carriers and shippers as well as those of the general public who have any informed opinion on the matter agree that we do have a national transportation policy both sound and reasonably comprehensive. Any assertion that we do not have such a policy is directed to administration rather than legislation. There is, however, a difference of opinion among carriers on the subject of administration and implementation of the policy. On the one hand, the railroads and the air lines feel that the statement of national policy as contained in the various transportation acts, including the Civil Aeronautics Act of 1938, is both sound and reasonably comprehensive as well as satisfactorily administered. On the other hand are the motor and water carriers, who, while admitting that we have a policy leading toward fair and impartial regulation, feel that the Interstate Commerce Commission's interpretations of its authority disclose a pattern of favoring the railroads to the detriment of other carriers.

**2. Regulation**—*Single versus separate regulatory agencies.*—The consensus of opinion of carriers and other respondents is largely in favor of a single regulatory agency. The carriers now regulated by the Interstate Commerce Commission favor a single agency. The air lines, supervised now by a separate regulatory agency, wish to maintain the status quo. Users of transportation largely favor the single regulatory agency.

*Reorganization of the Interstate Commerce Commission.*—Sentiment is about evenly divided on this topic. The rail carriers and many users of transportation services see no need for it. Motor and water carriers, on the other hand, present a strong case for complete reorganization, which opinion is shared by various students of the general transportation situation. A general opinion prevails that a reorganization of the Interstate Commerce Commission would be necessary were this body given regulatory control over air transportation.

*Exemption of common carriers from the application of the anti-trust statutes where the activities in question are under the supervision of the regulatory agency.*—Sentiment, particularly as expressed by users of transportation, is overwhelmingly in favor of such an exemption.

*Federal promotion of common-carrier activities.*—The general opinion is overwhelmingly against federal governmental agencies engaging in the promotion of common-carrier activities. Among the carriers, the railroads were against it and the air lines favored it.

*Differentials in rates as between different types of carriers.*—The consensus is that differential rates are only warranted, desirable, or necessary when and to the extent that they reflect the difference or differences in (1) the cost of performing a service by any carrier or carriers; (2) the value of the service to the user.

*Coordination of transportation agencies of the same type and between different types.*—Sentiment is strongly in favor of carriers being permitted and encouraged to coordinate their services, both within a single field and between different fields, to the end that each carrier will perform for the public the service for which it is best adapted. It is felt, however, that the law should not force coordinated services but that they should be entirely voluntary, sub-

ject, of course, to proper requirements of a regulatory body and to sensible restrictions to insure against unreasonable restraints of competition.

3. **Finance**—*Advantages and disadvantages of various means of financing transportation agencies.*—The consensus here is that each means of common-carrier financing has its peculiar advantages and that the objective today is to achieve a good balance between the methods used. It is also felt to be important to keep fixed charges within limits having a direct relationship to probable earning power, under reasonably competent management, and without the hazard of direct or indirect confiscation of property.

*Building up common-carrier credit ability.*—It is generally held that the continuance of private ownership of common carriers depends in large measure upon the administration of our various transportation laws in such manner that the private investor may expect a reasonable return on his investment.

*Building up reserves.*—No doubt was expressed as to the wisdom of permitting common carriers to build up reserves to keep their properties in proper condition and to maintain services and employment during the periods of depression.

*Needs for new capital and how they may be met.*—Only a few estimates of common-carrier new-capital needs were received, but it is the general feeling that from 1946 to 1956 they will be double those of the 1920 decade. Such capital requirements can be met only if reasonable assurance of earnings can be given to restore confidence in common-carrier equities.

*Legislative or administrative remedies, if any, needed to encourage private-capital investment in the common-carrier industry.*—The general feeling on this subject is that any legislation which becomes necessary to implement our declared national transportation policy will be equally necessary to encourage private investment in common carriers.

*Effectiveness of present bankruptcy procedures in reducing capital structures.*—The consensus is that the present procedures are most unsatisfactory, resulting in transportation systems being controlled by the courts for undue periods of time and for the "freezing out" of equities on an unequitable basis. It is felt that if public confidence is to be restored in common-carrier securities there should be an immediate change in bankruptcy procedures for such carriers.

4. **Common Ownership and Integration**—Opinions expressed on this subject largely centered around the policy of common ownership, operation, and control of common carriers of the same type and of different types. The latter is commonly referred to as "integration." It is the general consensus that when consolidations of carriers of the same type can be voluntarily and naturally brought about that not only is the public interest promoted but carrier credit positions are improved, it is easier to maintain reasonable rates, savings in capital outlay and operating costs result, service in general to the public is improved, and greater stability is achieved by the carriers concerned.

Opinion on the question of common ownership and operation of carriers of different types is evenly divided among users of transportation services, with about 49 per cent of those who expressed an opinion on the subject not in favor of such "integration" and about 51 per cent approving such arrangements. Approval is usually qualified by the expression that such common ownership and operation should never be permitted to result in a monopoly. Railroads are in favor of "integration" while the water carriers, motor carriers, and the air lines are against it.

5. **Taxation**—It is the general consensus that taxes of common carriers should certainly bear some relationship to revenue and that multiple and discriminatory taxation, by various political subdivisions, should be avoided. This might be brought about through the establishment of a formula- for allocating among the states, for tax purposes, the equipment and plant of interstate carriers.

6. **Federal Aid to Transportation**—*General views on government aid to transportation and the extent, if any, that federal aid should be provided to various types of carriers.* — Opinion is overwhelmingly against federal aid to transportation agencies. The belief is clearly expressed that all carriers should pay their own way, except in very rare instances where private capital cannot, or will not, provide the service or because certain transportation facilities are needed for national defense.

*Opinions on whether present federal aid to transportation was working an unjust advantage or disadvantage to any types of carriers; and if so, what agencies and what remedies might be suggested.*—The clear consensus is that federal aid to other carriers works an injustice on the railroads. The remedies suggested are numerous, but all involve assessment of "user charges" for the self-liquidation of federal funds invested in highway, waterway, airway, and airport facilities.

7. **Interstate Barriers to Commerce**—*The extent to which the federal government has legal authority and public duty to remove state barriers to the free flow of commerce, apart from the considerations of safety.*—There is unanimity of opinion that the federal government possesses legal authority and public duty to remove state barriers, but there is a difference of opinion as to how this should be done and as to just what might be said to create such barriers considered "unjust and oppressive." There is also the realization that whereas some "barriers" can probably be removed under the "commerce clause" of the Constitution, many others arise out of state laws which the federal government might be reluctant to interfere with in peacetimes.

8. **The Submarginal Carrier**—*Government support of submarginal carriers and the possible attitude toward abandonment of such carriers where substitute service is available or can be provided.*—The consensus is that government support of the submarginal carrier is not warranted except in cases where the maintenance of a particular instrumentality of transportation is definitely necessary for the public good or national defense. It is the belief that submarginal carriers should be abandoned where substitute services can be provided. This attitude is of particular interest at this time, when coastwise and intercoastal water carriers are in such a crucial condition that we are faced with the possible loss of this form of transportation.

9. **Steps That May Be Taken, Apart from Congressional Action**—No specific proposals are made, but it appears to be the consensus that all those interested in transportation can play a part in solving the problem if they will qualify every "particularistic" ambition they may have regarding transportation by examining it in the light of the following yardstick: "Will what is proposed increase the economy of the nation's transportation service as a whole; will it help to preserve free enterprise in transportation; will it preserve and strengthen all of the transportation service which the recent war has shown to be indispensable to the national defense?"

A number of respondents made definite suggestions for amending present transportation laws in order to more clearly set forth the national tansportation policy, to make administration by regulatory bodies more effective, or to correct inequities which they felt exist at present.

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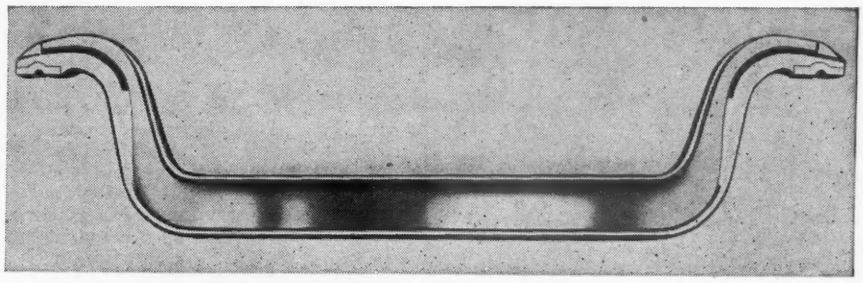
# *Lightweight Equalizer Bar*

A forged equalizer bar for passenger cars, 30 to 50 per cent lighter in weight than conventional types because of its I-beam section, has been developed by the Canton Drop Forging & Manufacturing Co., Canton, Ohio. One type of equalizer produced for passenger cars weighs only 405 lb. and replaces a rectangular-section bar weighing 800 lb., a weight saving of approximately 1,600 lb. per car.

Manufacture of the bar is made possible by the use of huge drop-hammer equipment and closed impression dies which control grain flow and metal structure.

The I-beam design is said to give the equalizer the strength and safety heretofore found only in parts of much greater cross-sectional areas.



**Forged equalizer bar with I-beam section is 30 to 50 per cent lighter than conventional bars**

# National Reserves of Energy Sources

**A survey of coals of all ranks and of proved reserves of petroleum—Relation of gas, oil-shale and coal resources to a future supply of synthetic liquid fuel—Fissionable materials**


***By ARNO C. FIELDNER***

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THE United States is fortunate in having large reserves of all kinds of mineral fuels in solid, liquid, and gaseous forms. The coal reserves, not including Alaska but including lignite, are estimated by the federal Geological Survey at 3.2 trillion net tons as of January 1, 1937.[1] This amount is thought to be 40 to 50 per cent of the world reserves of all ranks of coal. The proved reserves of petroleum in the United States, as of January 1, 1946, are estimated at 20.8 billion barrels by the Committee on Petroleum Reserves of the American Petroleum Institute.[2] This figure is about 35 per cent of the proved world reserves.[3] The proved reserves of natural gas have been estimated at not less than 135 trillion cubic feet as of January 1, 1945, by James E. Pew of the Petroleum Administration for War.[4] Very little data are available on the world reserves of natural gas.

## Oil Shale Resources

In addition to these fuel reserves, Winchester has estimated a potential reserve of 92 billion barrels of oil obtainable from the distillation of oil shale in the United States.[5] This amount is more than four times the present proved petroleum reserve.

Attention is called to an important difference between the estimates of reserves of natural gas and petroleum, on the one hand, and solid fuels, on the other.. Only the proved reserves are given for liquid and gaseous fuels. These are increased each year by new discoveries and extensions of fields and are decreased by the year's production. Since 1940 the petroleum reserve has increased only two billion barrels. During the same period the estimates of natural-gas reserves have increased from 80 to 135 or more trillion cubic feet. Undoubtedly, much more oil and gas will be discovered in the United States, and in this respect these fuels differ from coal and oil shale. The solid-fuel reserves are estimated from geological observations and measurements of thickness and extent of deposits obtained from surface outcrops, trenching, exploratory tunnels, shafts, and drill cores. No great accuracy can be claimed for these estimates, but future exploration is not likely to add greatly to the solid-fuel reserves. Some geologists believe that revisions will be downward as more detailed exploration or development data are obtained in the various fields.

No estimate of national energy resources can be complete without considering fissionable materials and the future development of industrial heat and power from them. A group of American scientists, in a report to Bernard M. Baruch, United States representative on the United Nations Atomic Energy Commission, released on September 7, 1946, estimated that the operating cost of atomic power for industrial use would be only 23 per cent more than in a modern public utility plant using coal costing $7.00 a ton. With coal at $10.00 a ton, the operating costs would be the same. This report was based on studies made under the direction of Dr. Charles A. Thomas, vice-president and technical director of the Monsanto Chemical Company.[6] It was estimated that a nuclear power plant of 75,000-kilowatt capacity could be built and equipped for $25,000,000 and that the operating cost, including three per cent interest on investment, would be 0.80 cent per kw.-hr. as compared to a coal plant of the same capacity costing $10,000,000 for installation and 0.65 cent per kw.-hr. for operation.

**"Attention is called to an important difference between the estimates of reserves of natural gas and petroleum, on the one hand, and solid fuels, on the other. Only the proved reserves are given for liquid and gaseous fuels. These are increased each year by new discoveries and extensions of fields and are decreased by the year's production. . . . Undoubtedly, much more oil and gas will be discovered in the United States, and in this respect these fuels differ from coal and oil shale. . . . Some geologists believe that revisions [of solid fuel reserves] will be downward as more detailed exploration or development data are obtained in the various fields."**

## Commercial Atomic Energy

While this cost is too high to compete with coal under present conditions, it is reasonable to expect that material lowering of cost will follow an energetic research program on the industrial utilization of atomic energy. It is probable that safe and economical central-station power ultimately will be developed on a commercial basis, and it also may prove feasible for driving large ships; but in the absence of radically new developments, small and mobile power and heating plants will continue to need our present forms of mineral fuels.

Information is not available on the national reserves of fissionable materials —uranium and thorium. On the basis of 1,600 tons of coal being equivalent to one pound of fissionable uranium products only about 800,000 tons of the latter are required to be equivalent to the national reserve of 3.2 trillion tons of coal.

All evidence points to very much larger reserves of coal than of oil and gas, as shown in Table I, where all the mineral fuels are expressed in equivilent tons of coal of 13,000 B. t. u. per lb. calorific value. The total of all ranks amounts to approximately 2,600 billions of tons of 13,000 B. t. u. coal, whereas the proved petroleum reserve is equiva-

[1] Hendricks, T. A., Chapter 1, Coal Reserves, in Report of Energy Resources Committee to National Resources Committee, entitled Energy Resources and National Policy, January, 1939, pp. 281-286. U. S. Gov. Print. Off., Washington, D. C.

[2] Proved U. S. Crude-Oil Reserve Totals 20,826,813,000 Barrels. A.P.I. Quarterly, April, 1946, pp. 24-26.

[3] The World's Oil, Proved reserves still in the earth total more than 59 billions barrels. The Lamp, Standard Oil Company of N. J., April, 1946, p. 12.

[4] Pew, James E., Natural Gas and Its Products During the War. Petroleum in War and Peace, 1945, p. 124.

[5] Winchester, D. E., The Oil Possibilities of the Oil Shales of the United States: Federal Oil Conservation oBard, Rept. II, January, 1928, pp. 13-14.

[6] Thomas, Charles, A., Nonmilitary Uses of Atomic Energy. Chem. and Eng. News, vol. 24, Sept. 25, 1946, pp. 2480-3.

This article is an abstract of a paper presented at the annual meeting of the American Society of Mechanical Engineers held at New York December 2-6, 1946.

lent in heating value to only 4.8 billion tons of coal and the proved natural gas reserve is equivalent to 5.2 billion tons. Excluding fissionable materials, coal comprises 98.8 per cent of our mineral-fuel energy reserves. Oil shale amounts to 0.8 per cent, petroleum to 0.2 per cent and natural gas to 0.2 per cent. While we cannot forecast further discoveries of oil and gas, it appears on the basis of present knowledge that the ultimate reserves of oil and gas will be very small as compared to the reserves of coal and lignite. As the supply of oil and natural gas declines below the demand, it will be necessary to resort to coal and other sources of energy, either by direct substitution or by conversion of the solid fuels to liquid and gaseous forms. Fuel gases from coal by carbonization or complete gasification have long been in commercial use, and in recent years commercial processes have been developed for the conversion of coals to liquid fuels by direct hydrogenation of coal or hydrogenation of tars or gases produced from coal.

## Various Ranks of Coal

The minimum thickness of beds included in the Geological Survey estimate of reserves is 14 in. for bituminous and anthracitic coals, 2 ft. for subbituminous coal, and 3 ft. for lignite. Coal beds lying more than 3,000 ft. below the surface were not included in the estimates. There is comparatively little coal in the United States that would require mining at depths beyond 3,000 ft. The estimated coal reserves do not allow for losses in mining; that is, they are not limited to recoverable coal as is the case with the petroleum and natural-gas estimates. In computing the life of a reserve based on an assumed annual production, as given in column 7 of Table I, allowance was made for 35 per cent mining losses for anthracite and 30 per cent for bituminous coal and lignite.

On the basis of energy content, the total coal reserves are distributed among the different ranks of coal as set forth in Table II.

From the standpoint of regional distribution, the principal reserves are grouped in the Eastern province, consisting of Pennsylvania, Ohio, Maryland, West Virginia, Virginia, eastern Kentucky, Tennessee, and Alabama; the Interior province, consisting of Illinois, Indiana, western Kentucky (comprising the Eastern region of this province) and Iowa, Missouri, eastern Kansas, Oklahoma and Arkansas (comprising the Western region); and the Northern Great Plains, Gulf, and Rocky Mountain provinces, extending from North Dakota and Montana through Wyoming, Colorado, Utah and New Mexico and including Texas. The reserves of these provinces are summarized in Table III.

It is evident from this review of the fuel reserves of the United States that ample supplies of coal are available for the production of the necessary requirements of gaseous and liquid fuels when the natural gas and petroleum reserves approach exhaustion and need to be supplemented from other sources. Satisfactory fuel gases have been manufactured from coal or from coke and petroleum for many years. Processes and equipment for this purpose have been well-developed, and the costs are known. In recent years in Germany, in particular, processes have been developed and put into commercial operation for the manufacture of liquid fuel from coal and from lignite. It is quite reasonable, therefore, to assume that plenty of gaseous and liquid fuels will be available in the future for many years, probably a thousand years; and of course, for a much longer period if atomic energy can be harnessed economically for the generation of heat and power. The cost probably will be greater than the present cost of petroleum and natural gas, but future developments in the more efficient utilization of fuels should go far in offsetting the cost of conversion.

This is the long-view picture. But how about the near view? What will be the effect of the increasing natural gas reserves and the declining rate of discovery of new petroleum fields?

## Trend of Petroleum Reserves

The trend of discovering additional reserves of petroleum in new fields in the United States has been downward since 1939. During the same period, the annual production increased from 1.26 to 1.7 billion barrels. While the present proved reserves—20.8 billion barrels—are the largest ever established, they are only 12.5 per cent greater than the reserves of January 1, 1940. This approximate figure has been maintained by upward revision of reserves of previously discovered fields. Such revisions are made up of extensions of pools as more wells are drilled and increased recovery obtained in drilling and refin-

**Table I—Estimated Mineral-Fuel Reserves of the United States**

| Description | Reserve Jan. 1, 1946 | Assumed annual production | Equivalent billions of net tons, bituminous coal, 13,000 B.t.u. per lb. calorific value[a]: Reserve Jan. 1, 1946 | Percent of total fuel reserves | Assumed annual production | Reserve divided by annual production plus loss[b] |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Anthracite, billions of net tons | 15 | 0.060 | 15 | 0.6 | 0.059 | 165 |
| Low-volatile bituminous coal, billions of net tons[c] | 52 | .115 | 56 | 2.2 | .124 | 317 |
| High-volatile bituminous coal, billions of net tons[c] | 1,351 | .467 | 1,403 | 54.2 | .485 | 2,024 |
| Subbituminous coal, billions of net tons | 818 | .014 | 598 | 23.1 | .010 | .... |
| Lignite, billions of net tons | 939 | .004 | 484 | 18.7 | .002 | .... |
| Total, all ranks of coal, billions of net tons | 3,175 | .660 | 2,556 | 98.8 | .680 | 2,595 |
| Petroleum, billions of barrels[d] | 20.8 | 1.7 | 4.8 | .2 | .392 | 12.3 |
| Oil from oil shale | 92 | 1.7 | 21.2 | .8 | .392 | 54.1 |
| Natural gas, trillions of cu. ft.[d] | 135 | 4.0 | 5.2 | .2 | .154 | 34 |
| Total, all fuels | | | 2,587 | | 1.226 | 1,700 |

[a] Heating values used in conversion: Anthracite, 12,700 B.t.u. per lb.; low-volatile bituminous coal, 14,000 B.t.u. per lb.; high-volatile bituminous coal, 13,500 B.t.u. per lb.; subbituminous coal, 9,500 B.t.u. per lb.; lignite, 6,700 B.t.u. per lb.; crude petroleum, 6,000,000 B.t.u. per bbl.; natural gas, 1,000 B.t.u. per cu. ft.
[b] 65 per cent recovery is assumed for anthracite and 70 per cent for all other coal and lignite.
[c] Includes some medium-volatile coal.
[d] Proved reserves only.

**Table II—Percentages of Various Ranks of Coal Comprising the Total Coal Reserves of the United States**

| | Per cent of total coal reserves in equivalent tons of 13,000 B.t.u. coal |
|---|---|
| Anthracite coal | 0.5 |
| Low-volatile bituminous coal | 2.5 |
| High-volatile bituminous coal | 55 |
| Subbituminous coal | 23 |
| Lignite | 19 |
| Total | 100 |

**Table III—Coal Reserves of Various Ranks, Distributed by Provinces**

| Provinces | Billions of net tons: Anthracite coal | Bituminous coal | Subbituminous coal | Lignite | Totals |
|---|---|---|---|---|---|
| Eastern | 15.1 | 525.2 | .... | .... | 540.3 |
| Interior | .2 | 508.0 | .... | 0.1 | 508.3 |
| Northern Great Plains, Rocky Mountain, and Gulf | .1 | 360.3 | 763.9 | 939.4 | 2063.7 |
| Totals | 15.4 | 1393.5 | 763.9 | 939.5 | 3112.3 |

ing by the application of improved technologic methods. In 1945, 400 million barrels were discovered in new fields and 1,700 million barrels were added to the proved reserves by the revision and extension of old fields. The total of 2,100 million barrels was 23 per cent higher than the 1945 production of 1,700 million barrels.

The proved reserve is about 12 times the current rate of production. It is a serious question whether this ratio of reserves to production can be maintained without greatly increased discovery and production costs. Higher production costs mean higher prices for gasoline and other petroleum products, which in turn will lead to a greater proportion of conversion of crude petroleum to the more valuable products, such as motor fuels and domestic heating oils, and it would lead to increasing importation of foreign petroleum from South America and the Persian Gulf region.

However, from the standpoint of national security, as well as sound business, it is not desirable to place too great dependence on foreign sources of petroleum. Recent war-time experience proved that the overseas supply of petroleum could be seriously interrupted, even from nearby sources, such as South America and along our own coastal routes from Texas. Therefore, it seems essential that we develop our domestic sources of synthetic liquid fuels to the point where they could be utilized in time of emergency and where they would place a ceiling on the price that could be charged on foreign oil.

## Synthetic Liquid Fuels

A broad survey of other sources of liquid fuels in the United States indicates that petroleum may be supplemented by (1) alcohols from the fermentation of vegetable matter, (2) conversion of natural gas by the gas-synthesis process, (3) distillation of oil shale, (4) liquefaction of coal or lignite by the high-pressure hydrogenation process, and (5) conversion of water gas from coal or lignite by the gas-synthesis process. Any or all of these supplementary sources may come into use as petroleum supplies decline to the point where these higher-cost synthetic products become commercially competitive with natural petroleum products.

Alcohol—Alcohol has been used satisfactorily as a constituent in blended motor fuels in many foreign countries. Its present cost is greater than that of gasoline from petroleum. The place alcohol will take in the provision of future motor fuels will depend largely on its cost in comparison with gasoline from oil shale, lignite, and coal.

Conversion of Natural Gas—Natural gas can be converted to carbon monoxide and hydrogen, which are the raw materials required for producing liquid hydrocarbons by the gas-synthesis process. With natural gas costing not more than 5 cents per 1,000 cu. ft., engineers of American petroleum companies have estimated the cost of the gasoline produced at figures ranging from 5 to 9 cents per gallon. Recent estimates tend toward the lower figure. Operation of commercial plants in Kansas and Texas should give reliable technical and cost data for further development of more natural-gas plants and also for the larger range problem of utilizing coal or lignite in the gas-synthesis process. While the proved reserves of natural gas are somewhat larger than the proved petroleum reserves, in terms of weight or heating value, they are very much smaller than the solid-fuel reserves, and much of the natural gas will find a more profitable outlet than its conversion to liquid fuel at the expense of losing one-half to two-thirds of its heating value.

Oil Shale—The oil-shale deposits are estimated at 92 billion barrels of recoverable oil. This amount is sufficient to supply our requirements at the 1945 rate of consumption of 1.7 billion barrels of oil for about 50 years, or about four times as long as our present proved petroleum reserves. The greater part of the shale reserve is in western Colorado, southwestern Wyoming, and eastern Utah. The assay-value of these shales varies from 15 to 60 gallons of crude oil per ton of shale. Present estimates of the over-all cost per barrel of producing crude shale oil in this conutry vary from $1.80 to $2.50. These are educated guesses at the best. No commercial operations on which reliable estimates can be based have yet been conducted on American shales.

Liquid Fuels from Coal—Liquid fuels may be obtained from all ranks of coal, from lignite to anthracite, by one or more of the following processes: (1) The carbonization of bituminous coal, (2) the hydrogenation of high-volatile bituminous coal, subbituminous coal, lignite, and coal tar, and (3) liquid hydrocarbons by catalytic synthesis from water gas (carbon monoxide and hydrogen) by the Fischer-Tropsch process.

Byproduct Light Oil and Tar—Light oil and tar are obtained as byproducts in the manufacture of coal gas and coke. These byproducts can be used as liquid fuels. The heating value of coal tar averages about 16,500 B. t. u. as compared to 19,000 B. t. u. per pound for petroleum. Much of this tar is used as a liquid fuel at steel plants. From 10 to 12 gallons of tar and 3 gallons of light oil suitable for motor fuel are obtained in the high-temperature carbonization of 1 ton of coal. Low-temperature carbonization of coal yields 20 to 35 gallons of tar per ton of coal. Low-temperature tar is more like petroleum than is high-temperature tar. Neither high- nor low-temperature carbonization converts all of the coal to liquid fuel. In a coke-oven plant the main product is coke; therefore, the number of such plants cannot exceed the market available for coke, unless the coke can be used in a parallel plant for the production of carbon monoxide and hydrogen for conversion to liquid fuels. Fortunately, such a process is now available.

## Direct Production Processes

There are two processes for the direct production of synthetic liquid fuels from coal or lignite. These are the coal-hydrogenation, or Bergius-I. G., process, and the gas-synthesis, or Fischer-Tropsch, process. Both processes were invented and developed in Germany and were in commercial use in Germany for several years before the beginning of World War II. Liquid fuel is a primary product in both processes; combustible gases and solid waxes are obtained as byproducts. There is no large residue of coke, such as is obtained in carbonization processes. Therefore, hydrogenation or gas-synthesis plants can be installed for the principle objective of making liquid fuels.

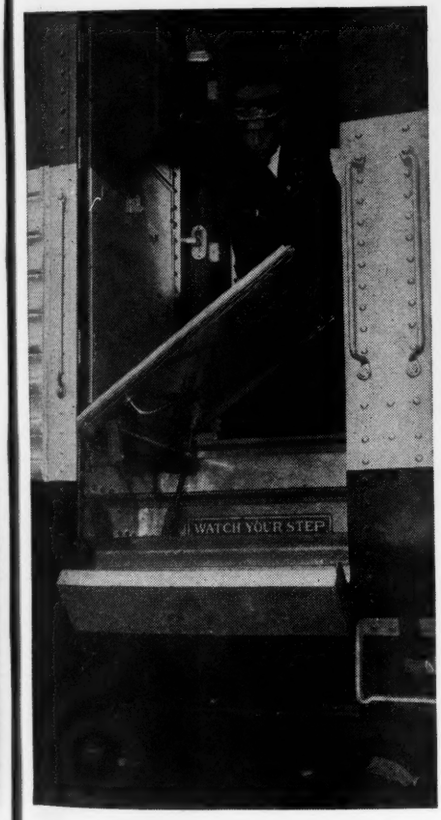
From a conservation point of view, it is fortunate that low- and medium-volatile bituminous coals are not suitable for hydrogenation. On the basis of energy content, these coals comprise only 3 per cent of our total coal reserves. They are needed for the production of metallurgical coke for the steel industry and for supplying semismokeless domestic fuel. The large reserves of high-oxygen, poorly coking coals of Ohio, Indiana, western Kentucky, and Illinois and those high-volatile bituminous coals that are not excessively high in ash or sulphur west of the Mississippi river are available and potentially suitable for the production of liquid fuels by the hydrogenation process.

The subbituminous coals of Wyoming, Colorado, and Montana and the lignites of the Dakotas, Montana, and Texas are readily liquefied, and, from the point of view of wise utilization of mineral resources, constitute appropriate raw materials for synthetic liquid fuels. These coals slack and break down into small pieces on exposure to air. Therefore, they do not stand transportation to any great distance from the mines nor can they be stored safely for long periods without some precautions that will retard this weathering process. Conversion of these coals to liquids would solve the storage and transportation problems.

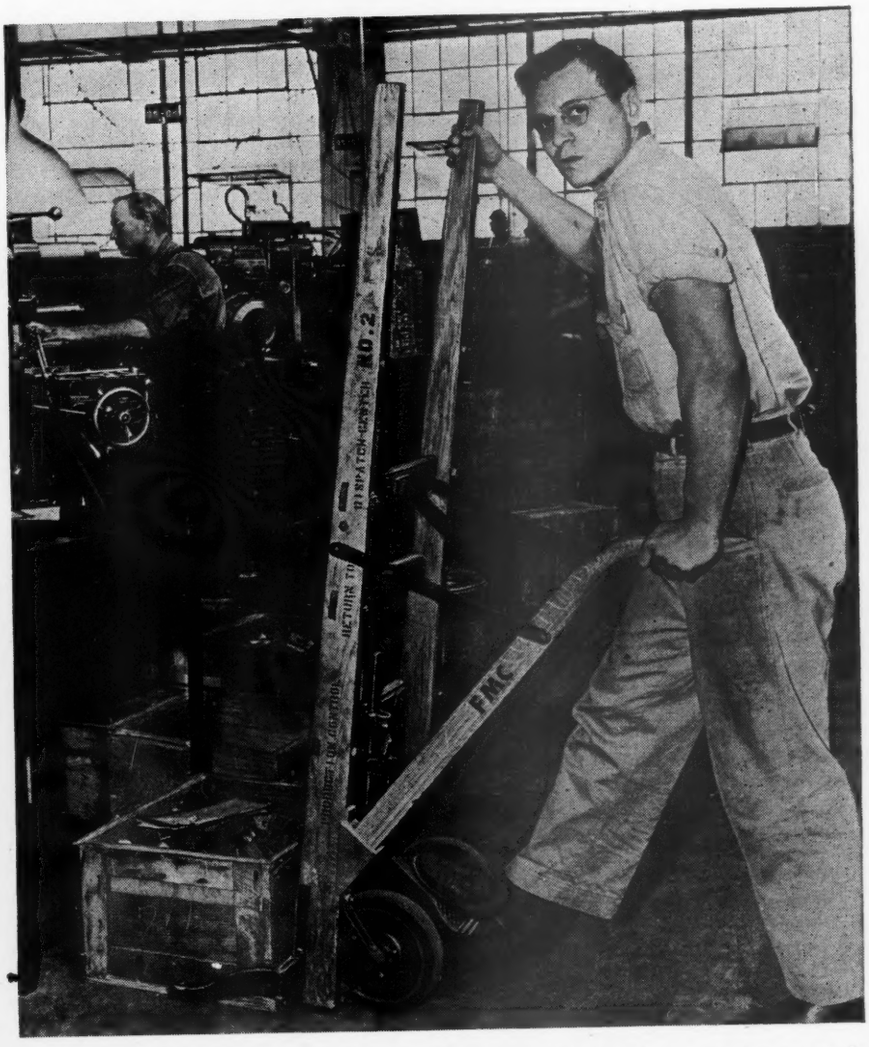
In the assay work thus far conducted in the Bureau of Mines laboratories, liquefaction proceeds most readily in coals of more recent geological age than Carboniferous. Approximately 0.6 ton of high-grade bituminous coal is required to produce 1 barrel of gasoline Progressively larger amounts of coal are required as the rank of the coal decreases. For subbituminous coal the requirement is 0.9 ton and for lignite 1.2 tons.

The gas-synthesis or Fischer-Tropsch process has a much wider application to more diverse raw materials than does the hydrogenation process. Almost any carbonaceous material can be reacted with steam to produce carbon monoxide and hydrogen, which in turn are reacted with each other in their conversion to liquid hydrocarbons. Raw materials that have been used for this purpose include anthracite, all ranks of bituminous coal, coke, lignite, coal gas, natural gas, charcoal, wood, and other vegetable matter. The German plants used coke from bituminous coal in the Ruhr district and brown-coal briquets or brown-coal char in central Germany.

Although much information has been obtained by the American technical oil mission to Germany, the data on costs require much more detailed examination than has yet been accomplished. The cost estimates from Germany vary greatly in different plants and reflect hasty development and construction to meet war needs. From these reports thus far examined and from British and American industry estimates it appears that, in general, the cost of producing gasoline from solid fuels in this country by the hydrogenation process would be about 10 to 15 cents a gallon more than the cost of production from petroleum; with future improvements in the Fischer-Tropsch process that are likely to develop as a result of research, it is regarded as quite possible that gasoline and Diesel fuel will ultimately be produced at a cost of only 6 to 8 cents more than the present cost of production from petroleum. Some authorities believe that this cost will be less than that of mining and processing oil shale. The Bureau of Mines, in its synthetic-liquid-fuel program, is making no assumptions on costs at present but is including oil shale and both synthetic-fuels processes in its experimental investigation on methods and costs.




**Retractable steps on the new L. & N. "Humming Bird" and the "Georgian"**

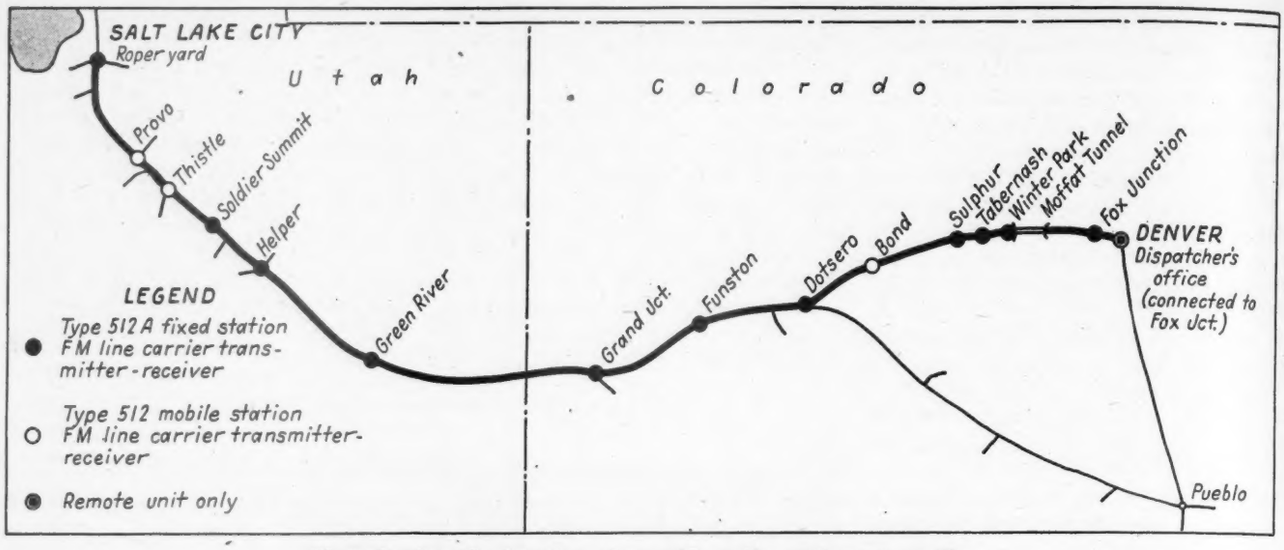



**Loading of pallets for pick up by power-lifts is speeded by the use of clamp trucks which simplify the handling of boxed materials**

## *Clamp Truck*

To supplement the work of power-lift trucks in handling materials and supplies, the Food Machinery Corporation, Riverside, Calif., has introduced a new line of clamp trucks. Short, powerfully-tipped "arms" at the base of the trucks squeeze with sufficient strength to lift loaded boxes weighing up to 600 lbs., this force being applied by the operator by stepping on a foot pedal.

Among other features, the new trucks include a front shield, claimed to permit the handling of heavily loaded boxes without spilling the contents, and a tilting frame to facilitate carrying a stack of boxes or to provide extra leverage for heavy lifting. Furthermore, they can be maneuvered in and out of small areas, freeing power-lift trucks for use on heavier and more cumbersome jobs.




**Map showing the location of wayside radio equipment on the Rio Grande between Denver, Colo., and Salt Lake City, Utah**

# *Rio Grande Installs Radio to Improve Through Freight Service*

**Project includes end-to-end communication on through freight trains and train-to-wayside station communication over 576 miles of road between Denver, Colo., and Salt Lake City, Utah**

CULMINATING approximately two years of extensive testing and experimenting with end-to-end and train-to-wayside station radio, the Denver & Rio Grande Western is installing very-high-frequency radio equipment on fifteen 5,400-hp. Diesel-electric road service freight locomotives and the same number of cabooses for end-to-end radio communication on through freight trains, such as the "Flying Ute", operating between Denver and Salt Lake City via the Moffat Tunnel route, a distance of 576 miles. Four trains have already been equipped and are in regluar service. Installation on remaining units is progressing rapidly. This equipment is frequency modulated (FM), and is designed for operation in the 152-162-megacycle railroad band allocated by the Federal Communications Commission, at the assigned frequency of 159.810 megacycles.

Also, low-frequency induction radio equipment is being installed on the same 15 cabooses. Installation has been completed at 10 wayside stations and five dispatchers' offices for communication between cabooses and wayside stations and offices, as well as between stations and offices. This equipment utilizes the existing telephone and telegraph wires for communication between wayside stations and moving trains, and between the stations proper. The system is induced, or superimposed so to speak, upon the message telephone circuit on the pole line paralleling the railroad, without interruption to that circuit. The equipment is frequency modulated, and is designed for operation in the 70 to 200-kilocycle band at 170 kc., with a maximum power output of 5 watts by way stations and 50 watts by mobile caboose stations.

## The Wayside Equipment

The wayside induction equipment is of two types, namely, fixed and portable. There are 11 fixed units and 3 portable ones. Fixed units are located at Fox Junction, Winter Park, Tabernash, Sulphur, Dotsero, Funston, the dispatcher's office at Grand Junction, Green River, Helper, Soldier Summit, and Roper yard at Salt Lake City. Portable units are located at Bond, Thistle and Provo. A remote unit, in the dispatcher's office in the Denver National Bank Building at Denver, is connected to the fixed unit at Fox Junction, thus saving unnecessary duplication of equipment. Location of these facilities is shown on the map.

## Why Installed

The VHF and the induction radio systems are entirely independent of each other. The wayside station operators cannot listen in on the conversations between the conductors and engineers on the trains, and the engineers cannot hear conversations between the conductors and the operators at the wayside stations.

The primary reason for the installation of these radio communication facilities is to speed up the handling of freight traffic, help eliminate delays, and, at the same time, provide an added factor of safety. The use of the equipment is for the sole purpose of passing information back and forth regarding train movements, and in no way takes the place of the regular train dispatching system.

In this installation, many problems had to be coped with in providing efficient communication between the engineer and conductor, and at the same time not interfere with other proposed

adio services. Some of the problems ere the result of the difficult terrain ver which this road operates. For example, there are 50 tunnels in the 576 iles of main-line track between Denver and Salt Lake City, ranging in ength from 100 ft. to 6.2 miles, the atter being the Moffat tunnel. Thirty f these tunnels fall within 35 miles, between Denver and Winter Park, on part f the 129 miles where the Rio Grande perates over the Denver & Salt Lake. n addition, there are many cuts, cans, curves and extremely rugged terain. However, between Grand Junction and Helper the railroad passes hrough relatively flat and open territory.

## Advantages

Thus far, the use of radio has indicated many advantages. For instance, a westbound freight train from Denver was headed into the passing track at De Becque, Colo., in C. T. C. territory. There was a broken rail between De Becque and Akin, and trains were permitted to proceed on a clearance card only. The passing track at Akin was occupied by an extra eastbound train, with a second eastbound train immediately behind it fouling the main line. The westbound freight train at De Becque occupied the passing track, and there were four passenger trains following behind which could not proceed to Akin without sawing by the congested passing track at that point. The dispatcher used the radio to instruct the conductor of the westbound freight train at De Becque to break his train and shove 20 cars on a stock track leading off the passing track, to permit the eastbound extra train on the passing track at Akin to proceed to De Becque and occupy the passing track with the westbound freight train. This allowed a clear main line at Akin for the four westbound passenger trains to go through and pass the second eastbound train which had formerly obstructed the main line.

This complicated move was made with the assistance of the radio, without the conductor leaving the caboose, and no walking was involved, except for the head brakeman walking back 20 cars to make the cut. The trainman suggested that probably one hour was saved by the use of radio. Lesser situations that are not unusual, but which occur quite frequently, include sticking brakes, clearing passing track switches, advising that rear brakeman is aboard the caboose, spotting helper engines for water, highballing from the rear, reporting hot boxes, and discussing general train conditions and train orders.

An example of how the radio is used on a through freight train is indicated by the following log of operations, kept on a westbound movement of the "Flying Ute", red ball freight train between Denver and Salt Lake City.

"12:00 a.m.—Denver—Air check O.K.'d by radio.

3:45 a.m.—Fox Jct.—Air check O.K.'d by radio after picking up 24 cars at Fox.

6:00 a.m.—Cliff—Helper engine O.K.'d on train.

10:10 a.m.—Arrive Bond—Cleared switch by radio.

11:05 a.m.—Out Bond—Picked up conductor and brakeman at station—highball by radio when on.

3:40 p.m.—Arrive Grand Jct.—Cleared switch track with radio.

4:20 p.m.—Out Grand Jct.—Air test O.K.'d by radio—highball by conductor.

5:19 p.m.—Ruby—Light out at west end of block—reported by radio to conductor. Instructed engineer to proceed 8 m. p. h. to next signal—all handled by radio—engineer reported next signal O.K.

5:27 p.m.—Conductor checked consist to engineer.

5:53 p.m.—Conductor reported smoke near middle—will watch.

6:18 p.m.—Conductor ordered engineer to stop to investigate hot box.

6:55 p.m.—Conductor reported cannot repair and for brakeman to call dispatcher for set out. Car set out.

7:30 p.m.—Highball from conductor.

12:35 a.m.—Out Helper—Air test O.K.'d and highball by radio.

1:43 a.m.—Soldier Summit—Air test O.K.'d and highball by radio.

5:20 a.m.—In yards—rear clearance given by conductor."

Generally speaking, constant communication between the engineer in the cab and the conductor in the caboose has eliminated several stops en route, and has reduced delays through terminals where switching is required. Communication between the crews of freight trains and dispatchers and agents at wayside stations has enabled crews to obtain operating information "on the fly" without stopping and walking into the station, all of which has resulted in saving considerable time for freight trains.

## Seasonal Fruit Rushes

The use of radio, employing portable induction-type units at strategic points, has been an outstanding aid during the seasonal fruit rushes. For example, at Grand Junction and in the surrounding territory there is large seasonal fruit business, with Palisade and Clifton, nearby towns, the centers of loading. By the installation of a temporary induction radio unit at each of these points, a communication system to the division headquarters at Grand Junction is provided. Strategic handling of both loaded and empty cars is realized by being able to communicate instantaneous loading conditions. This gives the shippers better service and faster handling, and prevents excessive accumulation cars on the sidings. This same equipment has been used to advantage in the Alamosa district during the seasonal vegetable rushes.

**Radio-equipped Diesel-electric road service locomotive No. 545, showing engineer talking into the handset**

The radio installation was made under the direction of W. W. Pulham, superintendent of communications, and under the supervision of E. H. Musgrove, radio engineer. The major items of VHF and induction radio equipment were furnished by the Aireon Corporation.

# GENERAL NEWS

## 11 Months Net Income Totaled $197,000,000

### Net railway operating income for the same period was $515,709,057

Class I railroads in the first 11 months of 1946 had an estimated net income, after interest and rentals, of $197,000,000, as compared with $506,920,789 in the corresponding period of 1945, according to the Bureau of Railway Economics of the Association of American Railroads. The 11-months' net railway operating income, before interest and rentals, was $515,709,057, compared with $891,275,338 in the same period last year.

Estimated results for November, 1946, showed a net income of $38,400,000, compared with $34,384,068 in November, 1945, while the net railway operating income for that month was $64,074,383, compared with November, 1945's $60,714,286. In the 12 months ended with November, 1946, the rate of return averaged 1.72 per cent, as compared with 3.46 per cent for the 12 months ended with November 30, 1945.

**Effect of Carry-Back**—The A. A. R. statement noted that the taxes and net earnings for November and for the first 11 months of 1946 are after taking credit in the accounts for carry-back tax credits, adding that such credits totaled approximately $14,700,000 for November, 1946, and $99,000,000 for last year's first 11 months. It said that both the net railway operating income and the net income for November and the 11 months would have been correspondingly reduced had the carry-back credits not been made.

Gross in the first 11 months of 1946 totaled $6,990,072,083, compared with $8,284,927,965 in the same period of 1945, a decrease of 15.6 per cent. Operating expenses amounted to $5,807,723,098, compared with $6,086,670,396, a decrease of 4.6 per cent.

Forty-nine Class I roads failed to earn interest and rentals in the first 11 months, of which 21 were in the Eastern district, 10 in the Southern region and 18 in the Western district.

Class I roads in the Eastern district in the 11 months had an estimated net income of $19,000,000, compared with a net income of $204,269,500 in the same period of 1945. For November, their estimated net income was $9,000,000, compared with $19,037,560 in November, 1945. The 11-months' net railway operating income in the Eastern district was $167,385,054, compared with $376,731,573 in the same period of 1945; for November, it was $20,889,824, compared with $31,556,379 in November, 1945.

Gross in the Eastern district in the 11 months totaled $3,118,988,818, a decrease of 10.7 per cent compared with the same period of 1945, while operating expenses totaled $2,670,456,580, a decrease of 1.7 per cent.

**In the South**—Class I roads in the Southern region in the 11 months had an estimated net income of $23,000,000, compared with a net income of $69,365,690 in the same period of 1945. For November, they had an estimated net income of $5,400,000, compared with a net income of $3,140,911 in November, 1945. Those same roads in the 11 months had a net railway operating income of $72,637,399, compared with $127,906,557 in the same period of 1945. Their November net railway operating income amounted to $10,523,844, compared with $8,918,898 in November, 1945.

Gross in the Southern region in the 11 months totaled $969,959,648, a decrease of 15.1 per cent compared with the same period in 1945, while operating expenses totaled $806,262,147, an increase of 2.1 per cent.

Class I roads in the Western district in the 11 months had an estimated net income of $155,000,000, compared with $233,285,599 in the same period of 1945. For November, they had an estimated net income of $24,000,000, compared with a net income of $12,205,597 in November, 1945. Those same roads in the 11 months had a net railway operating income of $275,686,604, compared with $386,637,208 in the same period of 1945. Their November net

(*Continued on page 151*)

**CLASS I RAILROADS — UNITED STATES**
**Month of November**

| | 1946 | 1945 |
|---|---|---|
| Total operating revenues | $ 658,160,195 | $ 661,181,176 |
| Total operating expenses | 536,081,000 | 548,561,340 |
| Operating ratio—per cent | 81.45 | 82.97 |
| Taxes | 45,028,778 | 40,050,388 |
| Net railway operating income (Earnings before charges) | 64,074,383 | 60,714,286 |
| Net income, after charges (estimated) | 38,400,000 | 34,384,068 |
| **Eleven Months Ended November 30, 1946** | | |
| Total operating revenues | $6,990,072,083 | $8,284,927,965 |
| Total operating expenses | 5,807,723,098 | 6,086,670,396 |
| Operating ratio—per cent | 83.09 | 73.47 |
| Taxes | 527,583,017 | 1,145,902,237 |
| Net railway operating income (Earnings before charges) | 515,709,057 | 891,275,338 |
| Net income, after charges (estimated) | 197,000,000 | 506,920,789 |

## Hold Christening for B.&O.'s Twins

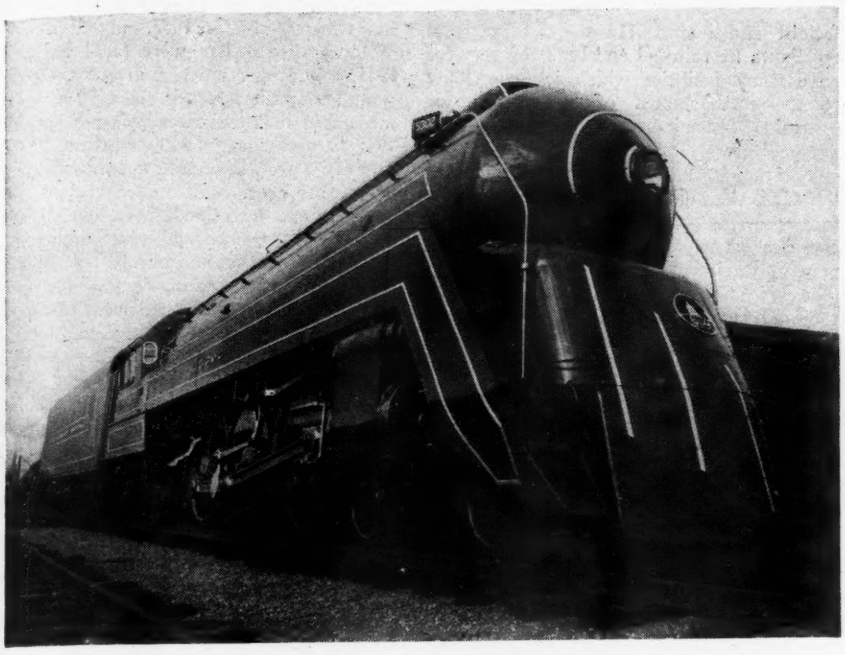
### Streamlined "Cincinnatian" in double ceremonies before daylight runs begin

Both sections of the Baltimore & Ohio streamlined coach train, "The Cincinnatian," were christened January 7, in simultaneous ceremonies held at Washington, D. C., and Cincinnati, Ohio. At Washington, Mrs. Robert A. Taft, wife of the senior senator from Ohio, christened one of the twin trains, while at Cincinnati, Mrs. W. H. Kellogg, wife of the city manager, officially named the second. Participating with Mrs. Taft in the ceremonies at Washington were Colonel J. Monroe Johnson, director of the Office of Defense Transportation, and Roy B. White, president of the B. & O., both of whom spoke briefly at the dedication.

Each train consists of a combination baggage-buffet-lounge car, three coaches and a combination diner-observation-lounge car hauled by a Pacific-type steam locomotive, all of which were built at the railroad's Mt. Clare shops. The three coaches have a total seating capacity of 176 passengers, with all seats reserved at no extra fare. The baggage-buffet-lounge car contains a baggage space, a special room for the crew, a lounge section seating 16 passengers, serving tables for 8 passengers, a lunch counter and a bar. The combination diner-observation car seats 23 passengers in the dining section and 21 passengers in the observation end. The facilities of the two special feature cars are made available as additional conveniences for the comfort of the coach passengers.

The train is equipped with air-conditioning, fluorescent lighting, individual reclining seats, a public address system for making announcements and for the reception of radio broadcasts, a telephone system with five stations in the cars and locomotive for intercommunication between members of the crew, and electrically-operated water coolers. A stewardess-nurse will be a regular member of the crew and will have a private room in one of the coaches in which she may care for ill travelers and prepare food for babies.

The train will make the trip each way between Baltimore and Cincinnati in 12¼ hours and between Washington and Cincinnati in 11½ hours, leaving Baltimore at 8:00 a.m. and Cincinnati at 8:45 a.m. every morning. This is said to be the fastest train schedule ever posted for the run between these cities. Before being placed in regular service on January 19, the twin trains are being exhibited at most



**One of the four streamlined Pacific-type locomotives built by the Baltimore & Ohio to haul its new coach train, "The Cincinnatian"**

of the scheduled stops between Baltimore and Cincinnati.

## K. C. S. to Complete 50 Years of Service in 1947

The Kansas City Southern will celebrate its golden anniversary during 1947, marking 50 years of through service between Kansas City, Mo., and the Gulf of Mexico at Port Arthur, Texas.

In mid-1947 the road is scheduled to climax the major improvements to its properties by taking delivery of new, powerful Diesel-electric freight and passenger locomotives and the inauguration of new streamlined passenger equipment on reduced schedules. Planned for completion along the K. C. S. lines in 1947 are a flood control project near Spiro, Okla., a repair shop for Diesel-electric locomotives at Pittsburg, Kan., modernization and enlargement of port facilities at Port Arthur and general improvement of yard facilities and locomotive and car repair shops throughout the system.

## Club Meetings

The Car Foremen's Association of Chicago will meet January 13 at 8 p.m. in the Union station, Chicago. The meeting will be devoted to a discussion of the changes in the A. A. R. Rules of Interchange which became effective on January 1.

A meeting of the Northwest Locomotive Association will be held on January 20, at 8 p.m. at Woodruff Hall, St. Paul, Minn. C. F. Kottcamp of Bituminous Coal Research, Inc. will present a paper on "The Coal Burning Gas Turbine Locomotive."

The Northwest Car Men's Association has scheduled a meeting for January 13 at the Midway Club, St. Paul, Minn. at 8 p.m. The program will involve a discussion of changes in A. A. R. Rules of Interchange.

The annual meeting of the Canadian Railway Club will be held at the Mount Royal hotel, Montreal, on January 13 at 8 p.m. Paul E. Davenport, vice-president research of the American Locomotive Company, will be guest speaker.

A meeting of the New England Railroad Club will be held on January 15 at the Hotel Vendome, Boston, Mass., at 6:30 p.m. Carl R. Gray, Jr., vice-president of the Chicago & North Western, will speak on "Railroading—Old World vs. New."

The Transportation Club of the Rochester Chamber of Commerce will hold its twenty-third annual dinner at the Sheraton hotel, Rochester, N. Y., at 6:30 p.m., January 16. G. Lloyd Wilson, professor of transportation and public utilities at the University of Pennsylvania, will be the guest speaker.

## Oppose Canadian Rate Increase

Representatives of seven of the nine Canadian provincial governments appeared to be opposed to the Canadian railroads' request for authority to increase freight rates 30 per cent when they recently asked the Transport Board to require the railroads to supply detailed statistical information in support of their application. Counsel for the railroads asserted that some of the requested data were unavailable, some were already a matter of record, and more would be presented by their witnesses at the hearing on the proposed, scheduled to begin February 11.

## A. A. R. Letter Ballot Results

The A. A. R. Mechanical division has announced in a circular letter from Secretary A. C. Browning, dated December 9, 1946, the favorable action by member roads on 72 committee recommendations or propositions, submitted to the letter ballot at the annual meeting of the division in Chicago last August.

These individual propositions included Nos. 7, 29, 46, 48, 50 and 61, covering changes in the interchange rules which are approved for insertion in the 1947 Code of Interchange Rules; also Nos. 1 to 6, 8 to 21, 23 to 45, 47 to 60 and 62 to 72 to amend the standard and recommended practice of the division which are approved effective March 1, 1947, with the exception of Nos. 30 to 33, inclusive, covering definitions and designating letter for cars, which are approved effective immediately.

## Freight Car Loadings

Loadings of revenue freight for the week ended January 4, which included the New Year's holiday, totaled 687,428 cars, the Association of American Railroads announced on January 9. This was an increase of 59,461 cars, or 9.5 per cent, above the preceding week (which included Christmas), an increase of 34,450 cars, or 5.3 per cent, above the corresponding week last year, and an increase of 4,030 cars, or 0.6 per cent, above the comparable 1945 week.

Loading of revenue freight for the week ended December 28 totaled 627,967 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

**Revenue Freight Car Loading**

| For the Week Ended Saturday, December 28 | | | |
|---|---|---|---|
| District | 1946 | 1945 | 1944 |
| Eastern | 125,550 | 106,012 | 114,286 |
| Allegheny | 137,715 | 111,360 | 128,242 |
| Pocahontas | 36,905 | 26,974 | 33,721 |
| Southern | 93,836 | 74,442 | 85,757 |
| Northwestern | 70,860 | 60,166 | 66,857 |
| Central Western | 110,656 | 84,206 | 97,979 |
| Southwestern | 52,425 | 42,817 | 58,034 |
| Total Western Districts | 233,941 | 187,189 | 222,870 |
| Total All Roads | 627,967 | 505,977 | 584,876 |
| Commodities: | | | |
| Grain and grain products | 44,553 | 34,845 | 36,087 |
| Livestock | 11,153 | 11,479 | 10,411 |
| Coal | 135,969 | 100,923 | 115,489 |
| Coke | 13,833 | 12,921 | 13,045 |
| Forest products | 27,605 | 15,839 | 21,430 |
| Ore | 10,194 | 7,713 | 8,923 |
| Merchandise l.c.l. | 97,677 | 87,655 | 83,548 |
| Miscellaneous | 286,983 | 234,600 | 295,943 |
| December 28 | 627,967 | 505,977 | 584,876 |
| December 21 | 836,181 | 687,845 | 762,972 |
| December 14 | 828,787 | 771,594 | 750,242 |
| December 7 | 729,084 | 776,376 | 793,156 |
| November 30 | 660,911 | 803,774 | 807,836 |
| Cumulative total, 52 weeks | 41,341,205 | 41,918,120 | 43,408,295 |

*In Canada.*—Car loadings for the week ended December 28 totaled 48,205 cars, as compared with 73,367 cars for the previous week and 42,322 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

| | Revenue Cars Loaded | Total Cars Rec'd from Connections |
|---|---|---|
| Totals for Canada: | | |
| December 28, 1946 | 48,205 | 33,575 |
| December 29, 1945 | 42,322 | 28,270 |
| Cumulative totals for Canada: | | |
| December 28, 1946 | 3,681,699 | 1,802,098 |
| December 29, 1945 | 3,614,405 | 1,809,858 |

## D. C. Coleman Elected President of the Newcomen Society

D. C. Coleman, chairman and president of the Canadian Pacific, who is chairman of the Canadian committee of the Newcomen Society of England, has been elected president of the parent society in Great Britain, according to a C. P. R. announce-

ment, which described him as the third North American and the first Canadian to hold this office in the 25-year history of the Newcomen Society.

One of the chief aims of the society, an organization of engineers, physicists and industrialists to encourage and foster research and study of the history of material civilization throughout the world, is to provide a further link in the friendly and intimate relations between Great Britain, United States and Canada. Mr. Coleman's nomination for the presidency was proposed by American headquarters of the society at New York.

Previous presidents of the Newcomen Society who resided in North America were Col. C. E. Davies, of Washington and New York, of the United States Army, and the late William Moorehead Vermilye, senior vice-president of the National City Bank of New York.

## 41.3 Million Cars Loaded Last Year; Decrease from 1945

Loading of revenue freight on the railroads of the United States in 1946 totaled 41,341,205 cars, according to the Association of American Railroads. This was a decrease of 576,915 cars, or 1.4 per cent below the 1945 total of 41,918,120, and also was a decrease from the total for 1944 and 1943.

As shown in the accompanying tabulation of total loadings for the years 1946 and 1945 by commodity groups, the largest decrease was in ore loadings, while the largest increase were in loadings of less-than-carload merchandise and forest products, respectively.

| | 1946 | 1945 | Per cent Increase | Per cent Decrease |
|---|---|---|---|---|
| Grain and grain products | 2,497,336 | 2,733,968 | | 8.7 |
| Live stock | 924,016 | 893,525 | 3.4 | |
| Coal | 8,005,162 | 8,296,208 | | 3.5 |
| Coke | 586,947 | 694,707 | | 15.5 |
| Forest Products | 2,263,567 | 2,038,992 | 11.0 | |
| Ore | 1,995,172 | 2,474,336 | | 19.4 |
| Merchandise, l. c. l. | 6,336,465 | 5,528,509 | 14.6 | |
| Miscellaneous | 18,732,540 | 19,257,875 | | 2.7 |
| Total | 41,341,205 | 41,918,120 | | 1.4 |

## Fire Destroys N. Y. C. Pier

The New York Central's 980-ft. Pier 3 on the Weehawken, N. J., waterfront was completely destroyed on January 8 by a fire which also damaged the substructure of the road's adjacent Pier 4.

Although no definite estimate of the damage had been made at the time this issue of *Railway Age* went to press, a spokesman for the road said it would total "several million dollars."

## Santa Fe to Meet Demand for Air Speed—Gurley

New aircraft equipment, facilities and techniques are among the major items which the Atchison, Topeka & Santa Fe has provided to improve general transportation service in 1947, Fred G. Gurley, president, said last week.

Explaining the line's air transport policy, being effected through its subsidiary, Santa Fe Skyway, Mr. Gurley said the road proposed to meet the demand for air speed where desired in the transportation of freight and mail. He pointed out that the Santa Fe railroad and highway services have many facilities which can contribute to the establishment of an efficient air operation serving many places not now reached directly by air.

The Santa Fe has filed applications with the Civil Aeronautics Board for authority for it, or its subsidiary, to operate as a common carrier of property and mail in the general territory served by the Santa Fe. The air affiliate, on December 27, 1946, received four modified DC-4 cargo planes, each capable of carrying a 20,000-lb. payload.

## Alco's 1947 Production Will Center on Diesels

With new equipment and new standards of freight and passenger service becoming a reality, the railroads of the United States are approaching a second period of greatness, Robert B. McColl, president of the American Locomotive Company, said in a year-end statement. The recent rate rise of 17.6 per cent, he continued, gave the needed encouragement to assure continuation of the railroads' motive power and equipment program. It is estimated, he stated, that the railroads' modernization will cost $1,600,000,000.

"More than anything else," Mr. McColl said, "American Locomotive's plans for the future bespeak our faith in the railroads' future. We have said before and repeat that the railroads in the next 10 years will carry more freight and more passengers than in any peace-time decade in history.

"American Locomotive Company, of course, sees this future through the eyes of the creator of new and improved forms of motive power. We are going through our own modernization and expansion program to meet current and future demands of the railroads. We also are doing more than this. Contrary to historic industry practice, we are going through a transition from one kind of production to another.

"For a century," Mr. Coll went on, "we have been a leader in the manufacture of steam locomotives. In 1925, we introduced the Diesel-electric locomotive . . . . While manufacture of steam locomotives will continue to serve the interests of customers, foreign and domestic, who prefer steam motive power, we have spent $20,000,000 in research and development leading up to our new line of Diesels. At our Schenectady, N. Y., Diesel-electric plant we have introduced a station assembly line for mass production. We have perpetuated a long-standing manufacturing association with the General Electric Company."

The Schenectady plant, Mr. McColl said, was built in answer to the demands of the roads themselves. In 1935, only 20 per cent of locomotive orders were for Diesels. In 1941, this proportion had grown to 76 per cent. Today the figure is about 90 per cent. He stated that the company's estimate for 1947 is that Diesels will constitute 93 per cent of its production and steam locomotives only 7 per cent.

"It is our intention," Mr. McColl concluded, "to observe and test continuously all ideas for the improvement of motive power. Right now we are engaged in combustion tests for the development of a coal-burning gas turbine locomotive, and we will build a locomotive of this type. Some of our engineers are following closely the development of atomic power as it might be applied to locomotives, although we think that such development is 20 to 40 years away."

## T. & P. Establishes Multiple-Car Rates on Gasoline

Intrastate multiple-car rates on gasoline for blending purposes between several Texas & Pacific stations in west Texas have been published in Texas-Louisiana lines tariff 48-L, item 4975, supplement 38, for the account of that railway, and effective December 23, 1946.

The new rates are intended to permit the continued rail movement of gasoline between various west Texas refining centers, and were described as necessary to meet the "threat of pipeline competition." The tariff requires that the minimum shipment offered be 20 tank-car loads of 8,000-gal. capacity each, moving on one bill of lading, from a single origin to a single destination, on one day. Only one shipper and one consignee are permitted on each shipment, which is to be moved at the carrier's convenience.

## A. S. M. E. Railroad Division Program for 1947

At the annual meeting of the American Society of Mechanical Engineers, Railroad division, in New York on December 4 and 5, 1946, it was decided to hold two technical meetings during 1947 and the following general subjects were tentatively assigned: Semi-annual meeting at Chicago on June 17—Diesel locomotive design from the manufacturers' viewpoint; annual meeting at New York in December—One session on modern motive power developments, including gas-turbine types, and two sessions devoted to features of modern freight-car design.

New officers-elect of the A. S. M. E. Railroad Division Executive committee, installed at the annual meeting, included: Chairman, W. C. Sanders, general manager, Timken Roller Bearing Company, Railway division, Canton, Ohio; P. W. Kiefer, chief engineer, motive power & rolling stock, New York Central System, New York; B. S. Cain, assistant engineer, Locomotive division, General Electric Company, Erie, Pa.; J. M. Nicholson, mechanical assistant to vice-president, Atchison, Topeka & Santa Fe, Chicago; E. D. Campbell, vice-president, American Car and Foundry Company, New York; secretary E. L. Woodward, western mechanical editor, *Railway Age*, Chicago.

Four new members were elected to mem-

bership in the General committee. Frank Murphy, chief engineer, Pullman-Standard Car Manufacturing Company, Chicago, was elected in place of Mr. Campbell who was advanced to the Executive committee. Mr. Murphy's term will expire in 1947. The three new members elected to the General committee with terms expiring in 1951 included: G. W. Bohannan, assistant chief mechanical officer, Chicago & North Western, Chicago; C. D. Bryant, chief engineer, Technical board, Wrought Steel Wheel Industry, Chicago; and W. A. Newman, manager, Research department, Canadian Pacific, Montreal, Quebec.

## N. I. T. League Asks Railroads to Increase Car Orders

Chief executives of the Class I railroads have been urged by the National Industrial Traffic League "to take immediate steps to increase orders for needed freight cars because a lack of sufficient orders has been reported as being one of the factors delaying the car building program," Alonzo Bennett, president of the league, revealed in a statement issued this week. Meanwhile, Mr. Bennett also revealed that the league "has taken the freight car situation directly to the White House."

Its special committee on emergency transportation matters has conferred with John R. Steelman, assistant to the President, and "presented all phases of the matter, emphasizing the extreme seriousness of the situation to farmers, growers, producers, manufacturers and consumers." The committee also has discussed the situation with J. Monroe Johnson, director of the Office of Defense Transportation, and with R. V. Fletcher, president of the Association of American Railroads. These activities of the committee were reported to the railroad executives by Mr. Bennett in his letter, which went on to say:

"The shortage of cars is not confined to any one locality but is nation-wide, and we are advised that increases in allocation of grain to be exported will further deplete the supply of cars available for industrial use. Production by a great many industries is being curtailed materially through lack of adequate transportation. The league believes that the situation is so serious that unless prompt and vigorous action is taken to increase materially the car building program, the reconversion program and our national economy will be most seriously and adversely affected.

"The number of new cars actually being turned out at present, we are advised, is not even keeping pace with retirements. Under the instructions received from the membership of the league, I am taking the liberty of addressing this letter to you bringing to your attention the seriousness of the situation and urging your cooperation in increasing car orders so that the needs of the shipping and receiving public will be at least reasonably served. We will appreciate prompt advice as to the steps which will be taken to remedy the situation."

## 11 Months Net Income Totaled $197,000,000

(*Continued from page 148*)

railway operating income amounted to $32,660,715, compared with $20,239,009 in November, 1945.

Gross in the Western district in the 11 months of 1946 totaled $2,901,123,617, a decrease of 20.5 per cent compared with the same period of 1945, while operating expenses totaled $2,331,004,371, a decrease of 9.6 per cent.

## Kansas City Southern Receives 8,000-Hp. Diesel

The 8,000-hp. Diesel-electric road locomotive, recently delivered to the Kansas City Southern by Fairbanks, Morse & Co., for handling heavy freight trains over heavy grades on this road, consists of four 2,000-hp. units coupled together for multiple-unit operation from an engineman's cab in either end. The individual power units are essentially the same as furnished for the Union Pacific locomotive, described in the *Railway Age* of July 27, 1946, and may be combined for operation as a single locomotive or split into two two-unit 4,000-hp. locomotives, dependent upon service requirements.

The general dimensions of the K. C. S. 8,000-hp. Diesel locomotive are as follows: Length over coupler pulling faces, 259 ft. 4 in.; length of each locomotive unit, 64 ft. 10 in.; height, rail to roof, 14 ft. 7 in. The total weight of the complete locomotive, including a full complement of all running supplies, is approximately 1,355,000 lb., of which the weight on the drivers is 928,000 lb. The continuous tractive force is 163,920 lb.

The total fuel-carrying capacity of the complete locomotive is 6,600 gal.

## Barriger Gets Gold Reverser with Freight Diesels

By handing over a gold-plated reverser lever to John W. Barriger, president of the Chicago, Indianapolis and Louisville, C. R. Osborn, vice-president of General Motors Corporation and general manager of its Electro-Motive Division, on January 6 marked the delivery and introduction into Monon main-line service of six Diesel-electric freight locomotives—two of 3,000 hp. and four of 4,500 hp. The ceremony occurred in the Indianapolis, Ind., Union station. Later, at a luncheon for the city's Chamber of Commerce, the Monon president and the Electro-Motive executive described the advantages of Diesel motive power for "Indiana's railroad" from the standpoint of cost reduction and service improvement.

Pointing out that railroads can borrow money for Diesels at the same rate the government can borrow money, Mr. Barriger asserted that modern equipment for a carrier is not a luxury, but a necessity. It was his opinion that certain railroads do not obtain efficient instruments with which to work merely because they are rich, but that rich railroads are so because they possess modern equipment.

In view of the fact capital has never been so cheap as today, and that the advantages of Diesel motive power are proved the purchase of Diesel locomotives is a "riskless investment," according to the Monon head.

Mr. Osborn stated that his company, at the request of Mr. Barriger, made a detailed study of the railroad to determine what complete Dieselization could accom-

**Fairbanks, Morse four-unit locomotive**

plish. "This study brought out the facts that complete Dieselization could effect a 48 per cent saving in fuel costs and a 60 per cent reduction in locomotive repair bills, with substantial further savings on water pumping and storage, plus the secondary expense reductions that come from the elimination of ash dumping and removal, reduced maintenance of way and less roundhouse cost," he said. "The study further showed wide possibilities on the Monon for faster, more comfortable and luxurious passenger service, with very high on-time performance. It further showed that freight schedules could be stepped up from 25 to 40 per cent with greater reliability and with less damage to lading."

## Railroad Tells Taxpayers They Pay for Air "Economy"

"When a new baby arrives, the neighbors, doing what comes naturally, gather 'round and wish him well. Through childhood and adolescence, gifts are showered on him from poppa and momma and Aunt Minnie and Uncle Sam. But when baby reaches maturity, has an established business of his own with a yearly stipend rivaling the old man's and he still wants his momma and poppa and Uncle Sam to keep on buying him things and paying his taxes on his place of business, perhaps someone ought to gently suggest 'It's time you paid your own way.'"

With this introduction the Boston & Maine starts an advertisement, headed "You've been working on the runway," which appeared January 7 in the daily newspapers in its territory, the purpose of which is to direct the voters' and taxpayers' attention to the use of tax funds, national and local, for the benefit of privately owned commercial air lines. "The Boston & Maine, and every other railroad, welcomes *fair* competition," the advertisement observes, "but we are tired of air line operators boasting of reducing their fares and providing free meals and other frills for their passengers but not bothering to explain to the public why they can do this. We believe you should know that they can do this only because financial help from federal, state and city treasuries lowers their costs of operation."

The commercial air lines are now a "grown man," not a "baby" on whom the community should lavish gifts, the advertisement reminds New England taxpayers. "Right here in New England millions of dollars of taxpayers' money have been spent to develop so-called 'state' and 'municipal' airports," it continues. "These names are misnomers. 'State' and 'municipal' airports have been built and operated almost entirely as tax-free terminals for commercial air lines operating for private profit. Small planes owned by individuals are graciously allowed to land and take off from these airports when, as, and if, the commercial air lines aren't using the runways at the moment.

"The commercial air lines make only a token payment for use of these tax-free airports built and maintained by taxpayers," the Boston & Maine advertisement says further. "They have succeeded, thus far at least, in having the taxpayers (including the railroads) foot the bills for improving and enlarging the airports where they do business. The snow-removal bill alone on some airports here in northern New England often exceeds the rental paid by the air lines for using that airport.

"We find that a great many people do not know how much of their tax money has been and still is being poured into airports for the principal benefit of commercial airlines. And the taxpayers are now being asked to spend a lot more for maintenance and expansion of existing airports and constrtuction of new ones. This means millions of tax dollars to be spent at a time when states, cities and towns are desperately seeking new ways to raise money to pay school teachers and other municipal employees whose services are enjoyed by all the taxpayers."

The railroads are not looking for a "handout" from the taxpayers, says the advertisement, but readers are urged to "investigate now how much of the taxpayers' money has been and is being used in your community to support commercial air lines. Ask how much more your community plans to shovel into subsidies for air lines. Maybe you, too, are tired of 'working on the runway.'"

## Alco-G. E. 1,500-Hp. Diesels in Production

The American Locomotive Company has announced the delivery to the Chicago, Milwaukee, St. Paul & Pacific of seven 1,500-hp. Alco-General Electric multi-purpose Diesel-electric locomotives, part of an order for 18 of that type. Designated as a combination road and switching locomotive, it is capable of hauling heavy loads at speeds up to 65 m. p. h. and provides smooth starting and stopping for either freight or passenger service. The Milwaukee has specified 6-wheel trucks for branch line service, though the standard design has 4-wheel trucks.

Early in 1946 American Locomotive introduced a 6,000-hp. road locomotive and a 4,500-hp. freight locomotive. The 12-cylinder, V-type, turbo-supercharged Diesel engine of the 1,500-hp. unit is the same as the design used in the large freight locomotive. The new road-switcher weighs 115 tons, is 55 ft 5¾ in. between coupling faces and has a wheel base of 39 ft. 4 in. An electric traction motor is geared to each of the four driving axles. Starting tractive effort is 61,000 lbs. and continuous tractive effort at 13.5 m. p. h. is 34,000 lbs. Wheels are 40 in. in diameter and the fuel capacity is 800 gals.

## Program for A. S. C. E. Annual Meeting

The program of the 94th annual meeting of the American Society of Civil Engineers, to be held at the Commodore Hotel, New York, January 15 to 18, inclusive, contains a number of items of interest to railroad men. At the session of the Engineering Economics division, scheduled for January 16, there will be held a symposium on the problems of waterway clearances involved in the crossing of a water by a land traffic route. Thereunder, J. B. Akers, chief engineer of the Southern, will discuss the problem from the railroads' point of view. At the technical session of the Highway division on the same day, J. W. Wheeler, executive assistant to the president of the Chicago, Burlington & Quincy, will present a paper entitled "Evaluation and Coordination of Transportation."

The technical meeting of the Structural division on the same date will feature papers on the design of highway bridges.

President-elect E. M. Hastings, chief engineer of the Richmond, Fredericksburg & Potomac, will be presented to the society on the morning of January 15. There will follow a luncheon and address by E. O. Shreve, vice-president of the General Electric Company.

## New York Charges B. of L. E. Violates Discrimination Law

Henry C. Turner, chairman of the New York State Commission Against Discrimination, was quoted this week as saying that the Brotherhood of Locomotive Engineers is the only union which has neither acted nor given assurances that it will act to comply with that state's law prohibiting union restrictions on negro membership. Failure to meet the statute's requirements may lead to court action, it was indicated. Violation of the law is punishable by fine and imprisonment. As B. of L. E. general officers are outside New York's jurisdiction, it was assumed that local officers of

**The Milwaukee's new Alco-G. E.-built 1,500-hp. branch line Diesel**

he brotherhood would be charged with esponsibility for the alleged discriminatory ractices in any court proceedings.

## H. J. Arnett Leaves A. A. R.

After 45 years of railroad service, H. J. Arnett has retired as assistant to the chairman of the Car Service division of the Association of Amercan Railroads to open a new firm of transportation consultants with offices in the Colorado building, Washington, D. C.

## November Truck Traffic

Motor carriers reporting to the American Trucking Associations transported in November, 1946, 1,978,450 tons of freight, a decrease of 2.8 per cent under the 2,033,420 tons transported in October, 1946, but an increase of 19.5 per cent over the November, 1945, total of 1,655,164 tons. The November index figure was 93 per cent above the average for 1938-40.

The foregoing figures, according to the A. T. A., are based on comparable reports from 197 carriers in 40 states. Carriers in the Eastern district reported a tonnage decrease of 0.1 per cent under October, but 20.7 per cent over November, 1945; carriers in the Southern region reported a decrease of 2.6 per cent under October, but an increase of 19.6 per cent over November, 1945, while western carriers reported a decrease and increase of 8 per cent and 17.2 per cent, respectively.

## Meetings and Conventions

*The following list gives names of secretaries, dates of next or regular meetings and places of meetings:*

ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago 80, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo. Annual meeting, October 8-10, 1947, Houston, Tex.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise LaChance, Room 901, 431 Dearborn St., Chicago 5, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill. Annual meeting January 17-18, 1947, Union League Club, Chicago, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 16-18, 1947, Hotel Stevens, Chicago.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION. —W. J. Walsh, B. & O. R. R., Baltimore 1, Md.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Clifford G. Massoth, Illinois Central Magazine, 135 E. 11th Pl., Chicago 5, Ill.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—J. P. Nye, Tower Bldg., Washington 5, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Annual meeting, June 16-20, 1947, Chalfonte-Haddon Hall, Atlantic City, N. J.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS. —C. E. Davies, 29 W. 39th St., New York 18, N. Y.
Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN TRANSIT ASSOCIATION.—A. W. Baker, 292 Madison Ave., New York 17, N. Y.

AMERICAN WOOD-PRESERVERS' ASSOCIATION. — H. L. Dawson 1427 Eye St., N. W., Washington 5, D. C. Annual meeting, April 22-24, 1947, Multnomah Hotel, Portland, Ore.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O. Annual meeting, October 6-8, 1947, Lord Baltimore Hotel, Baltimore, Md.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—H. S. Whited, 5th & T Sts., N. E., Washington 2, D. C.

ASSOCIATION OF AMERICAN RAILROADS. — H. J. Forster, Transportation Bldg., Washington 6, D. C.
Operations and Maintenance Department.—Transportation Bldg., Washington 6, D. C.
Operating-Transportation Division. — L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.
Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.
Communications Section.—W. A. Fairbanks, 30 Vesey St., New York 7, N. Y.
Fire Protection and Insurance Section. —W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York 17, N. Y.
Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.
Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Safety Section. — J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.
Construction and Maintenance Section. —W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.
Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.
Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y.
Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 23-28, 1947, Convention Hall, Atlantic City, N. J.
Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill.
Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Annual meeting, June 23-25, 1947, Convention Hall, Atlantic City, N. J.
Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, April 15-17, 1947, Hotel Statler, St. Louis, Mo.
Motor Transport Division. — George M. Campbell, Transportation Bldg., Washington 6, D. C.
Car Service Division.—E. W. Coughlin, (Assistant to Chairman), Transportation Bldg., Washington 6, D. C.
Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.
Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Alton R. R., 340 W. Harrison St., Chicago 7, Ill. Annual meeting, May 7-9, 1947, Hotel Ambassador, Atlantic City, N. J.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill. Exhibit in conjunction with American Railway Bridge and Building Association Convention, September 16-18, Hotel Stevens, Chicago, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 15-18, 1947, Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—W. E. Angier, chief A. A. R. clerk, C. B. & Q. R. R., 547 W. Jackson Blvd., Chicago 6, Ill. Regular meetings, second Monday of each month, except June, July and August.

CENTRAL RAILWAY CLUB OF BUFFALO. — R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

CHICAGO LUNCHEON CLUB OF MILITARY RAILWAY SERVICE VETERANS. — Col. R. O. Jensen, Schiller Park, Ill. Luncheon, second Wednesday of each month, Chicago Traffic Club, Palmer House, Chicago, Ill.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS. —H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker Street, North Little Rock, Ark. Annual meeting, September 15-18, 1947, Hotel Sherman, Chicago, Ill.

MASTER BOILER MAKERS' ASSOCIATION. — A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting September 15-18, 1947, Hotel Sherman, Chicago, Ill.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, July 14-18, 1947, Boston, Mass.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—F. J. Armstrong, U. S. Radiator Company, Detroit, Mich.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C.

NATIONAL RAILWAY APPLIANCES ASSOCIATION. — C. H. White, Room 1826, 208 S. La Salle St., Chicago 4, Ill. Meeting and exhibit in conjunction with American Railway Engineering Association Convention, March 17-20, 1947, The Coliseum, Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB. — D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION. — E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB. — William S. Wollner, P. O. Box 458, San Rafael, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Cal., and Hotel Biltmore, Los Angeles, Calif.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Illinois.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill. Annual meeting, September 15-18, 1947, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION. —J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Exhibit in conjunction with meetings of A. A. R. Mechanical Division and Purchases and Stores Division, June 23-28, 1947, Convention Hall, Atlantic City, N. J.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section, of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis, Mo. Annual meeting, September 23-25, 1947, Arlington Hotel, Hot Springs, Ark.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 16-18, 1947, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS. —D. W. Brantley, C. of Ga., Savannah, Ga. Annual meeting, January 23, 1947, Atlanta, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q. and C. Company, 59 E. Van Buren St., Chicago 5, Ill. Exhibit in conjunction with Roadmasters' and Maintenance of Way Association Convention, September 16-18, 1947, Hotel Stevens, Chicago, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

# With the Government Agencies

## Car-Service Inquiry Launched by I. C. C.

### Commission also will determine whether $2 per diem charge would promote efficiency

Separate investigations, for the purpose of inquiring into railroad car-service practices generally and to determine whether a $2 per day rental charge for cars, other than refrigerator and tank cars, would promote greater efficiency in the use of equipment during periods of car shortage, have been instituted by the Interstate Commerce Commission in orders dated December 18, 1946, and made public last week. The proceedings are docketed as No. 29669, Car Service—Freight Cars, and No. 29670, Increased Per Diem Charge on Freight Cars.

Both have been assigned for hearing at the commission's Washington, D. C., offices next month—the former on February 4 before Examiner Claude A. Rice and the latter on February 12 before Examiners Myron Witters and Paul C. Smith. All railroads subject to the Interstate Commerce Act are respondents in both proceedings, and the order in No. 29670 makes respondents also of "all other persons owning or leasing freight cars (except tank and refrigerator cars) to any such carrier."

**O. D. T.'s Suggestion**—While the orders make no reference to that request, the investigations seem designed to cover much the same ground as that which would have been involved in the inquiry sought last August by Director J. Monroe Johnson of the Office of Defense Transportation. As reported in the *Railway Age* of September 7, 1946, page 415, the O.D.T. director asked the commission to institute an investigation with respect to car service (except as to tank and refrigerator cars), including the basis and rates of compensation paid by carriers for the use of cars not owned by the carrier using them. At the same time Colonel Johnson suggested that the per diem rate might be increased from $1.15 to $2 in an effort to discourage undue detention of cars by railroads. The per diem rate has been $1.15 since February 1, 1945, when it was increased from $1; and in that connection the commission has before it the complaint wherein some 160 short-line railroads are asking that it be cut to 95 cents.

The commission's immediate response to the Johnson request was in invitation to interested parties to submit their views. The Association of American Railroads and the American Short Line Railroad Association both made presentations opposing the Johnson proposal and questioning the commission's authority to require the imposition of punitive per diem rates (see *Railway Age* of September 28, 1946, page 530, and October 5, 1946, page 578).

The order instituting the per diem probe cites the Interstate Commerce Act's section 1 (14) (a) which gives the commission power to establish "reasonable rules, regulations, and practices with respect to car service by common carriers by railroad . . . including the compensation to be paid and other terms of any contract, agreement, or arrangement for the use of any locomotive, car or other vehicle not owned by the carrier using it."

The order further stipulates that the inquiry is with a view to making findings and entering orders requiring the establishment of an increased per diem rate during periods of car shortage "if it is found that it will promote greater efficiency in the use and increase the supply of cars." Such orders would be "under the authority of the Interstate Commerce Act, and particularly sections 1 (10), (11), (13) and (14)," all of which relate to car service.

**Wide Range**—The No. 29669 investigation will cover car service matters generally, except the distribution of coal cars at mines. As set out in the order, this inquiry is "for the purpose of determining whether the rules, regulations, and practices with respect to the use, control, supply, movement, distribution, exchange, interchange and return of plain, ventilated, and automobile box cars, refrigerator cars, stock cars, ordinary gondola, flat, and hopper cars, including covered hopper cars . . . used in freight service by common carriers by railroads, are unreasonable or otherwise unlawful, whether such cars are being wastefullly, uneconomically, or inefficiently used, controlled, supplied, moved, exchanged, interchanged, and returned, and whether such cars are being unfairly or inequitably distributed among shippers."

## Further Suspends North-South L.C.L. Minimum Rates

The Interstate Commerce Commission has further suspended from December 30, 1946, until June 15 various agency tariffs wherein the railroads are proposing to apply the class rates between points in Official territory and the Official territory gateways as minima on l.c.l. and any-quantity interterritorial traffic between points in Official territory and the South. The proceeding is docketed as I. & S. No. 5439.

As noted in the *Railway Age* of November 23, 1946, page 899, the tariffs were originally suspended for only 45 days during which time it was expected that Director Jensen of the commission's Bureau of Traffic might have been able to work out a "proper adjustment" with the carriers.

## I.C.C. Can't Change Seatrain Certificate

### Supreme Court thwarts commission effort to restrict operating rights

The United States Supreme Court this week thwarted the Interstate Commerce Commission's attempt to deprive Seatrain Lines, Inc., of its water-carrier certificate authorizing the transportation of "commodities generally" and to substitute in lieu thereof a "corrected" certificate restricting Seatrain operations to the transportation of liquid cargoes in bulk, and "of empty railroad freight cars, and of property loaded in railroad cars received from and delivered to rail carriers, and transported without transfer from railroad cars." Justice Black delivered the unanimous opinion of the court which affirmed a judgment setting aside the commission's order that had been entered by the United States district court for the district of Delaware.

In reaching its determination, the Supreme Court took occasion to make the general observation that the commission's authority to impose a restriction in an original certificate as to the type of service a water carrier could utilize "is by no means free from doubt," and thus its "alleged authority to alter a certificate . . . is certainly no greater." Previously, Justice Black had pointed up the fact that Part III of the Interstate Commerce Act gives the commission less authority with respect to water-carrier certificates than it has under Part II with respect to motor-carrier certificates.

**Limit on Authority**—He noted specifically that the commission is authorized to issue certificates to rail, motor, and water carriers; but "it is specifically empowered to revoke only the certificates of motor carriers." And "it is of some significance that section 208 which prescribes the authority of the commission in granting certificates to motor carriers authorizes the commission to 'specify the service to be rendered' by the carriers. But section 309, which empowers the commission to grant certificates to water carriers, does not authorize the commission to specify 'the service to be rendered.'"

The decision under court review was made by the commission in its report on reconsideration in the No. W-543 proceeding (260 I. C. C. 430), with three commissioners dissenting (see *Railway Age* of March 17, 1945, page 522). It followed the report in the Foss Launch & Tug Co. case where the commission promulgated

(*Continued on page 159*)

# Mitchell Is Named for I.C.C. Vacancy

## Iowa judge nominated to fill Commissioner Porter's place; Miller reappointed

President Truman on January 8 sent to the Senate his appointment of Judge Richard F. Mitchell of the Supreme Court of Iowa as a member of the Interstate Commerce Commission for the late Claude R. Porter's unexpired term ending December 31, 1949. At the same time the President also submitted his reappointment of Commissioner Carroll Miller for a new seven-year term ending December 31, 1953.

If Judge Mitchell is confirmed by the Senate, the commission membership will remain with Iowa, for Mr. Porter was also from that state. Judge Mitchell is well known to the railroads as a result of his service on various emergency boards which investigated wage disputes in the industry, and as referee in National Railroad Adjustment Board cases. He is in his 59th year, and he has been a judge of the Iowa Supreme Court since 1932, serving as chief justice from 1934 until 1939.

Judge Mitchell is a Democrat and has been a member of the party's national committee. It is understood that his name was on a slate of nominees for appointment to the commission which was submitted last week to President Truman by a committee of the Association of Interstate Commerce Commission Practitioners. J. Carter Fort, vice-president and general counsel of the Association of American Railroads, was a member of the Practitioners' committee.

Commissioner Miller has been a member of the commission since 1933, when he was appointed by the late President Roosevelt. He was subsequently reappointed by Mr. Roosevelt for a second term which expired at the end of last year. He continues to serve, however, under that provision of the Interstate Commerce Act which permits a commissioner whose term has expired to carry on until his successor qualifies.

### Department of Agriculture Asks I. C. C. to Probe Truck Rates

The Department of Agriculture has asked the Interstate Commerce Commission to institute a general investigation with respect to the revenue needs of motor carriers of freight, and to make "no ex parte decisions affecting any of the proposals now filed, or which will inevitably be filed . . . by motor carriers, insofar as they seek general horizontal rate increases consequent upon or analogous to rail increases authorized in Ex Parte Nos. 148-162."

According to the petition, the "large and increasing" number of applications and tariffs filed by and on behalf of the motor carriers for general rate increases stemmed from the I.C.C.'s decision in Ex Parte Nos. 148 and 162, and "represent formal steps on the part of the . . . motor carriers to increase their general rate levels in proportion to the increases granted . . . in the rail dockets. . ." It further asserted that the Agriculture Department has information to the effect that "many, if not all," of the major motor carrier rate bureaus will soon publish horizontal increases comparable with those granted the railroads in Ex Parte No. 162.

Conceding that it has "no complete means" of determining the revenue needs of motor carriers in all respects, the department has neverthless seen data indicating, it said, that the revenue needs of motor carriers generally are "neither emergent nor precarious," and that because of the rail rate increases, there is a "definite probability" that considerable traffic will be diverted from the railroads to trucks.

The Department's citations of motor-carrier rate-increase proposals which prompted it to ask for the general investigation, included a tariff filed by the Middle Atlantic States Motor Carrier Conference. That tariff became effective January 6 when the commission voted not to suspend it.

### Would Sell "Inch" Pipe Lines for Oil or Gas Transport

The War Assets Administration has recommended to Congress that the Big Inch and Little Big Inch pipe lines be sold to the highest bidder either for the transportation of petroleum and its products or natural gas, or a combination of both. W.A.A. had already invited new bids, due February 8, for the purchase of the lines on that basis. All bids received in response to a previous invitation were rejected.

The report to Congress recommended that the pumping and other equipment used in the transportation of petroleum be maintained by the purchaser so that the government could recover and use the lines to move oil again within 90 days. Meanwhile Representative Walter, Democrat of Pennsylvania, has introduced House Joint Resolution 2 which would prohibit W.A.A. "from disposing of certain pipe lines and facilities used for transporting oil until six months after final report and recommendations of the Federal Power Commission in its docket numbered G-580 have been submitted to the Congress." The F.P.C. proceeding mentioned in the resolution is a general "fact finding" inquiry with respect to the natural gas situation.

Big Inch and Little Big Inch have been transporting natural gas since the recent strike of bituminous coal miners, the pipe lines having been put into the gas service on an emergency basis at that time.

### Stays S.P. Tariff Increasing Special-Train Minimum

The Interstate Commerce Commission has suspended from January 1 until August 1 tariffs whereby the Southern Pacific and affiliated lines are proposing to increase the minimum requirements for the operation of special trains, for the exclusive use of special parties, from 100 to 150 adult, first-class, one-way tickets. The suspended schedules are those published in Supplement No. 10 to Agent H. W. Siddall's tariff I. C. C. No. 4628, and the suspension proceeding is docketed as I. & S. No. 5453.

# Two Truman Messages Go to New Congress

## Include discussion of management—labor relations and survey of economy

President Truman's state-of-the-union message went to Congress on January 6, while he submitted on January 8 the first of the annual economic reports which he is required to make under the Employment Act of 1946. The President's annual budget message was scheduled to be read to the Congress on January 10.

The state-of-the-union message included considerable discussion of labor-management relations, in which connection the President said, among other observations, that "the paralyzing effect of a nationwide strike in such industries as transportation, coal, oil, steel, or communications can result in national disaster." He added that the country had been able to avoid such disaster in recent years, "only by the use of extraordinary war powers" which "will soon be gone."

"In their place," the President went on, "there must be created an adequate system and effective machinery in these vital fields. This problem will require careful study and a bold approach but an approach consistent with the preservation of the rights of our people. The need is pressing."

**Another Commission**—The President would include the job of working out such a system in the assignment of a "temporary joint commission" which he recommended that Congress authorize for the purpose of inquiring "into the entire field of labor-management relations." Previously the President had said that the country was today producing goods and services "in record volume," despite the "outbreak of economic warfare in 1946." He added that it was nevertheless "essential to improve the methods for reaching agreement between labor and management and to reduce the number of strikes and lockouts;" but then he warned that "we must not, under stress of emotion, endanger our American freedoms by taking ill-considered action which will lead to results not anticipated or desired."

More specifically, the President recommended "early enactment of legislation to prevent certain unjustifiable practices"—which he identified as jurisdictional strikes; the secondary boycott, "when used to further jurisdictional disputes"; and use of economic force by either labor or management to decide issues arising out of the interpretation of existing contracts. Also, Mr. Truman called for "the broadening of our program of social legislation to alleviate the causes of workers' insecurity."

The "temporary joint commission" which the President asked Congress to provide for would consist of 12 members of the House and Senate, to be chosen by Congress, and 8 others to be appointed by the President as representatives of the "public," management and labor. Mr. Truman suggested that the commission should make its report not later than March 15.

**Wants Fare Tax Retained**—The message's brief reference to the President's plan to bring about a balancing of the federal budget revealed that the budget message would recommend continuance through the fiscal year ending June 30, 1948, of the excise taxes scheduled to expire next June 30 as a result of the Presidential order proclaiming the "cessation of hostilities" of World War II on December 31, 1946. As noted elsewhere herein, one of the taxes involved is the levy on amounts paid for the transportation of persons which is now scheduled to be cut back from 15 per cent to 10 per cent six months after the "cessation of hostilities."

Among other things, the "Economic Report of the President" reviewed the nation's economy of 1946 and discussed the "goals for 1947," indicating that the latter might be expected to be a year of $200-billion national income. The President said it was not clear that the basic industries were "fully adjusted" to that level of peacetime economy. "It will become increasingly important," he added, "that capacity goals in the basic industries such as steel, power, and transportation be set high enough so as not only to sustain present and foreseeable levels of economic activity, but also to permit their expansion."

In setting out recommendations for his "short-range program," Mr. Truman called for management and labor cooperation on problems of prices and wages, saying at the same time that Congress should raise the Fair Labor Standards Act's minimum wage "in view of the substantial rise in the cost of living and in the national production since it was enacted." Also, the President emphasized the importance of "a permanent high-production, high-employment economy."

**More "Federal Aid"**—His "long-range program" called for federal government attention to "wide regions of this country" which "still hold promise of tremendous economic development." The government, the President added, "should examine particularly the contribution it can make toward this development by stimulating production and distribution of low-cost hydroelectric energy, by developing flood control and navigation, by improving roads, by enforcing fair competitive rates of transportation, by removing barriers to truck transportation, by land drainage and irrigation projects."

With respect to federal-aid programs, the report said that more of them are being planned. It added that "these programs, particularly those related to health and education, public works and road and airport construction, contribute greatly toward bringing all sections of the country up to the levels of productivity consistent with American standards of living." As to public works generally, the President expressed his view that an attempt should be made to stabilize the program "according to our long-term needs," rather than to regard public works "as the first and foremost device to restore our whole economy when it sags." But this policy "by no means forestalls the expansion of public works as a sustaining factor if recessions or depressions should unfortunately develop despite our best efforts to avoid them."

On the matter of social security the President repeated in this report the state-of-the-union message's recommendation that the benefits be liberalized. And here Mr. Truman added that "in expanding general social security, the Congress should not overlook the railway workers, whose protection is under separate laws." In the latter connection the President did not remind the Congress that its predecessor had enacted the Crosser act (which he signed) making benefit provisions of the Railroad Retirement and Railroad Unemployment Insurance acts even more liberal than they had previously been as compared with social security benefits available to industrial employees generally.

## Susquehanna's Commuter Bus Service Still Intraterminal

Reporting on further hearing in No. MC-88797, Division 5 of the Interstate Commerce Commission has affirmed its prior report's finding that North Bergen, N. J., is within the New York, Susquehanna & Western's terminal area at New York and thus the road's commuter bus service between Susquehanna Transfer station in North Bergen and upper Manhattan is "an intraterminal operation." The decision, which dismisses the Susquehanna's application for a certificate covering the bus service, has the effect of exempting the operation from the Motor Carrier Act's regulatory provisions except those relating to qualifications and maximum hours of service of employees and safety of operation and equipment.

The division's prior report was noted in the *Railway Age* of August 29, 1942, page 354. Commissioner Rogers, then a dissenter, this time joined with his two colleagues, Commissioners Lee and Alldredge, to make the report on further hearing unanimous. The report also embraced No. MC-100604, which had involved an application of the Erie for a certificate covering the train-connection bus service between Rutherford, N. J., and Times Square, New York, which it operated from April, 1940, until June, 1943 when it was discontinued at the request of the Office of Defense Transportation, in order to conserve bus mileage. The Erie advised the commission that it did not desire to reestablish the service, and the application was dismissed as "moot."

## Hostilities' End Will Cut Fare Tax Back to 10 Per Cent

The tax on amounts paid for transportation of persons and for parlor and sleeping car accommodations will be cut back from 15 per cent to 10 per cent July 1 as a result of President Truman's order proclaiming the "cessation of hostilities of World War II," effective at noon December 31, 1946. The extra 5 per cent on the fare tax was among the war-time levies imposed in 1944 for the period ending six months after the cessation of hostilities.

The basic 10 per cent tax was imposed without expiration date by the Revenue Act of 1942 which also imposed the tax on amounts paid for freight transportation. The latter, which was not changed by the 1944 legislation, is thus unaffected by the Presidential proclamation; and it remains as it has been—three per cent except in the case of coal where it is four cents per ton. However, the 1944 legislation did give the Secretary of the Treasury authority to exempt from both taxes amounts paid for the transportation of persons on federal government transportation requests and amounts paid for the transportation of property on government bills of lading. Exemptions issued by the secretary pursuant to that authorization will be canceled as of July 1.

Meanwhile the Presidential proclamation will not affect basic emergency orders with respect to transportation such as those under which the Office of Defense Transportation functions. As the White House statement indicated, the formal termination of hostilities is a step which ends some wartime powers; but it does not terminate the "states of emergency" declared by the late President Roosevelt on September 8, 1939, and May 27, 1941; nor does it "have the effect of terminating the state of war itself."

## Car Service Orders

Revised Service Order No. 647 has been issued by the Interstate Commerce Commission to reinstate, with weekly car quotas for originating roads, the priority system on foreign-relief grain offered for loading at points in Oregon, Washington,, Idaho, and western Montana. The revised order became effective January 6 and will continue in effect until March 10 unless otherwise modified.

Under its provisions, the originating roads must furnish the following numbers of box cars per week for the priority traffic: Union Pacific, 390; Northern Pacific, 210; Great Northern, 90; Spokane, Portland & Seattle, 30; Chicago, Milwaukee, St. Paul & Pacific, 30. The original Service Order No. 647 was in effect from December 9, 1946, until December 21 ,1946, when it was suspended by Service Order 647-A.

Service Order No. 260, which prohibits the salting of ice in refrigerator cars transporting citrus fruits, has been modified by Amendment No. 5 to permit three per cent salting of ice in cars transporting tangerines from Florida. The amendment became effective January 3 and will expire February 1.

Service Order No. 653, which prescribes super-demurrage charges for gondolas, hoppers and covered hoppers, has been broadened by Amendment No. 1 to extend the coverage to gondolas classified as "MWB." Service Order No. 93, which provides for the use of giant refrigerator cars at freight rates applicable to standard reefers, has been modified by Amendment No. 10 to exempt certain heavily-insulated cars from the provisions of the order.

Service Order No. 663, effective from January 1 until February 1 unless otherwise modified, provides relief with respect to demurrage charges on cars of coal that were tied up at Charleston, S. C., during the recent miners' strike. Service Order No. 662-A, effective January 8, vacated Service Order No. 662, which had maintained since December 28, 1946, a permit

system for the transportation of export corn to New Orleans, La., and Texas ports.

Carload freight loading requirements with respect to clay and certain non-perishable commodities in barrels or drums were modified by the Office of Defense Transportation in Amendment No. 8 to Special Direction ODT-18-1, which became effective on January 8.

## Steel Industry Leaders Discuss Needs of Railroads

Executives representing a cross section of the steel industry were expected to attend a meeting at Washington, D. C., on January 10, at which time the Steel Products Industry Advisory Committee planned to discuss the steel needs for new freight cars and freight car repairs.

According to an announcement by the Civilian Production Administration branch of the Office of Temporary Controls, approximately 7,000 new freight cars will be required monthly this year to meet the minimum needs of the railroads. It said that with steel "tight" in virtually all types of products, particularly in sheet steel, the committee and government officials were expected to "weigh the requirements" of the freight car builders against the needs of other consumers.

"The . . . railroads have not made any substantial progress since V-J Day in replacing their war-torn rolling stock," the announcement noted. "Freight car output dropped to 3,828 units in October, 1946, from 4,016 in September because of labor and material shortages. At the October production rate, the domestic order backlog of 69,000 cars would require almost two years' production. . . .

"On December 17, 1946, the C. P. A. acted to improve the supply situation for railroad equipment manufacturers by stopping virtually all exports of steel for freight car making purposes. C. P. A. had previously provided for some informal aid to manufacturers of certain types of freight cars."

The announcement observed that repairs on freight cars have shown "some improvement," with the backlog of bad order cars dropping from 82,808 units in July, 1946, to 67,294 on November 1. It added, however, that the backlog must be "reduced considerably" to make sufficient equipment available for current needs.

## Registration of Lobbyists

Representatives of the railroads and railroad labor organizations are among those who have registered with the clerk of the House of Representatives and secretary of the Senate in conformity with requirements of the Regulation of Lobbying Act which was enacted last year as part of the law providing for the reorganization and "streamlining" of congressional procedures. The act requires publication in the Congressional Record of the registrations and certain information from quarterly statements which the registrants must make, and the first report, covering registrations up to and including December 20, 1946, appeared in the Record's January 3 issue.

The list of railroad representatives and their reported salaries included J. Carter Fort, vice-president and general counsel, Association of American Railroads, $40,000 per year; and three representatives of the Pennsylvania — Frank J. McCarthy, $14,790 per year; John E. Dougherty, $7,052 per year, and William H. Tinney, $5,842 per year. Representatives of railway labor organizations included: Hartman Barber, Brotherhood of Railway Clerks, $4,836 per year; Martin H. Miller and Earl C. Bassett, Brotherhood of Railroad Trainmen, $12,180 and $7,309 per year, respectively; D. C. Cone, Brotherhood of Railroad Signalmen, $5,250 per year; John T. Corbett, Brotherhood of Locomotive Engineers, $893 per month; E. L. Doyle, Brotherhood of Maintenance of Way Employees, $8,600 per year; W. D. Johnson, Order of Railway Conductors, $8,500 per year; A. E. Lyon, Railway Labor Executives Association, $9,000 per year; Jonas A. McBride, Brotherhood of Locomotive Firemen & Enginemen, $7,000 per year.

Other registrants included John V. Lawrence and Roland Rice, American Trucking Associations, $16,500 and $11,000 per year, respectively; Lachlan Macleay and William Allen, Mississippi Vallay Association, $15,000 and $4,200 per year, respectively; and Tom J. McGrath, National St. Lawrence Project Conference, per diem rate of $100. Most of the foregoing stated in their reports that their legislative activities were but a part of their duties, and that the reported compensation covered all duties.

## One-Customer Trucker Found to Be Common Carrier

With three members dissenting, the Interstate Commerce Commission has ruled that a trucking company which serves only one shipper has the status of a common carrier. The report on reconsideration in No. MC-13087 (Sub-No. 2) affirms Division 5's previous decision which granted a certificate to Fred J. Stockberger, doing business as Veech Transfer & Storage of Mason City, Iowa.

The certificate authorizes operations over irregular routes as a common carrier by motor vehicle (1) of supplies and materials used in the production and marketing of poultry and eggs between Mason City, on the one hand, and, on the other, points in Minnesota, North Dakota, South Dakota, Kansas, Nebraska, Missouri, Illinois, and Wisconsin, and (2) of waste paper from points in the foregoing states to Mason City and Tama, Iowa, and from Mason City to Tama. The evidence showed that both of the authorized services will be rendered for one shipper, and protestant rail carriers urged that proposed operation should be considered contract carriage.

"With this contention we do not agree," the commission said. "Although applicant will in the immediate future serve only a single shipper, there is no evidence of an intent to devote himself exclusively to such shipper or that any genuinely specialized service or handling is required or contemplated. The fact that only one shipper now seeks the proposed service, of itself, does not bring such operations within the definition of a contract carrier. It appears that the one firm was merely a source of sufficient traffic to support the service which applicant offers within the considered area. So far as appears from this record, such shipper is the only one shipping the considered commodities in any volume from the origins here involved. Should there be others, either now or in the future, applicant definitely has not negatived a willingness to serve, or a holding out to serve, any other shippers of like traffic."

The dissenters were Commissioners Mahaffie, Miller and Patterson. They filed no separate expressions, their disagreement with the majority being merely noted.

## Senate's Interstate Commerce Committee Headed by White

Senator White, Republican of Maine, has been designated chairman of the Senate committee on interstate and foreign commerce which has been set up in accordance with provisions of last year's congressional reorganization act, to take over the work of the former committee on interstate commerce and to assume jurisdiction also over matters heretofore handled by the former committees on commerce, interoceanic canals, and manufactures. In organizing for the initial session of the new Congress, the Senate and House made their rules conform with the reorganization act, thus cutting the number of Senate standing committees from 33 to 16 and those of the House from 48 to 19.

Senator White was designated chairman of the committee over the vigorous protest of Senator Reed, Republican of Kansas, who sought the chairmanship for himself. Although Senator White had been the ranking minority member of the committee on interstate commerce in the previous Congress, Senator Reed contended that Mr. White should not head the committee while he holds the position of Senate majority leader. The Republican leadership rejected the Reed contention and gave Mr. White both assignments.

Meanwhile Mr. Reed was assigned to the committee, which consists of 13 members—7 Republicans and 6 Democrats. In addition to Messrs. White and Reed, the Republican members are Senators Tobey of New Hampshire, Brewster of Maine, Hawkes of New Jersey, Moore of Oklahoma, and Capehart of Indiana. Democratic members are Senators Johnson of Colorado, Stewart of Tennessee, McFarland of Arizona, Magnuson of Washington, Myers of Pennsylvania, and McMahon of Connecticut.

## 1945 Salaries Over $10,000 Took 0.62 Per Cent of Payroll

Officers receiving salaries of $10,000 or more in 1945 took 0.62 per cent of that year's aggregate payroll of Class I line-haul railroads and Class I switching and terminal companies, including 24 carriers in those classes which reported no salaries of $10,00 or more. This compares with a 1944 figure of 0.58 per cent.

The 1945 salary data, derived from returns made by the carriers in their annual reports under Schedule No. 562, have been summarized in the usual way by the Bureau of Transport Economics and Statistics of

the Interstate Commerce Commission, the summary being Statement No. 4630 of the bureau. It shows that 1,428 officers received salaries of $10,000 or more in 1945 as compared with 1,356 in 1944, the aggregate amount paid to them having been $24,696,595 as compared with $23,000,745.

The average 1945 compensation of the $10,000-and-over salary group was $17,295, up $333 from 1944's $16,962 but just about on the 1940 basis of $17,297. The group consisted of 0.098 per cent of all employees in 1945 and 0.093 per cent in 1944.

Twenty-six 1945 salaries were in the $60,000-and-over bracket as compared with 21 in 1944. The aggregate 1945 compensation of these top executives was $1,877,900 or 7.6 per cent of the total paid to the whole $10,000-and-over group. Salaries of 773 officers or more than half of the group fell in the $10,000-to-$14,999 class, while 215 officers received 1945 salaries of $25,000 or more as compared with 199 in 1944.

In addition to the information on annual salaries of $10,000 or more, the statement, like its predecessors, contains a table which summarizes data on salaries paid by Class I line-haul roads to executives, officials, and staff assistants assigned to Division 1 and Division 2 in the commission's wage statistics. Employees thus assigned in 1945 totaled 14,940, including 6,547 executives, general officers and assistants, whose average 1945 salary was $7,991; and 8,393 division officers, assistants and staff assistants, whose average was $4,925. These compare, respectively, with 1944 averages of $7,882 and $4,882; and with 1929 averages of $7,508 and $4,166.

## Opening of Congress Brings Usual Flood of Bills

The eightieth Congress convened for its initial session on January 3, and the first few meeting days brought to the Senate and House of Representatives the usual flood of bills which comes to a new Congress. As was to be expected, many of the new bills are old measures being reintroduced, for all legislation pending before the seventy-ninth Congress at various stages short of final enactment died with the *sine die* adjournment of August 2, 1946.

Thus Representative Bulwinkle, Democrat of North Carolina, is again proposing legislation to stay the operation of anti-trust laws with respect to carrier rate-making procedures and other joint actions approved by the Interstate Commerce Commission. The new Bulwinkle bill is H.R. 221. Its predecessor died in the Senate last year after it had been approved by the House.

Also among the early arrivals in the legislative hopper were a resolution to approve the United States-Canadian agreement for the construction of the St. Lawrence seaway and power project; and various measures to prevent strikes in basic industries. Bills of interest to the railroads, together with their sponsors, include the following:

**Introduced in House of Representatives**

H. R. 12, to amend the Railroad Retirement Act of 1937 so as to provide for payment of benefits with respect to the month in which an annuitant or pensioner dies (Angell of Oregon).

H. R. 13, approving the agreement between the United States and Canada relating to the Great Lakes-St. Lawrence basin and authorizing the investigation through the Department of State with Canada of the feasibility of making the Great Lakes-St. Lawrence seaway self-liquidating (Kilburn of New York).

H. R. 21, to provide for federal participation in the financing of certain aeronautical developments (Beckworth of Texas).

H. R. 34, to declare and protect the rights of the public when labor disputes result in, or threaten to result in, danger to public health and safety (Case of New Jersey).

H. R. 47, to prohibit discrimination in employment because of race, creed, color, national origin, or ancestry (Clason of Massachusetts).

H. R. 85, to prevent interference with interstate or foreign commerce and to prevent interference with public utilities serving communities engaged in interstate and foreign commerce (Hoffman of Michigan).

H. R. 87, to diminish the causes of labor disputes burdening or obstructing interstate and foreign commerce (Hoffman of Michigan).

H. R. 90, to protect the public welfare when injuriously affected by strikes in public utilities (Hoffman of Michigan).

H. R. 152, to establish a Department of Civil Aviation (Walter of Pennsylvania).

H. R. 155, to amend the Federal Highway Act and other acts to permit the allocation of federal funds to the construction, reconstruction, or maintenance of publicly owned toll bridges or toll roads (Welch of California).

H. R. 221, to amend the Interstate Commerce Act with respect to certain agreements between carriers (Bulwinkle of North Carolina).

H. R. 229, to prohibit discrimination in employment because of race, color, national origin, or ancestry (Dawson of Illinois).

H. R. 242, to amend the Employers Liability Act so as to limit venue in actions brought in United States district courts or in state courts under such act (Jennings of Tennessee).

H. R. 266, to prevent interference with interstate and foreign commerce by sympathy or jurisdictional strikes or by boycotts (Miller of Nebraska).

H. R. 267, to prevent interference with interstate and foreign commerce by irresponsible acts of labor organizations and employers (Miller of Nebraska).

H. R. 268, to prevent work stoppages in industries vital to the public health or safety and public utilities whose rates are fixed by some governmental agency; and to provide a method for settling labor disputes in them (Miller of Nebraska).

H. R. 269, to prohibit discrimination in employment because of race, creed, color, national origin, or ancestry (Norton of New Jersey).

H. R. 270, to increase the minimum wage rate under the Fair Labor Standards Act of 1938 to 65 cents an hour (Norton of New Jersey).

H. R. 280, to amend the Interstate Commerce Act so as to prohibit the segregation of passengers on account of race or color (Powell of New York).

H. R. 283, to promote the safety of employees and travelers on railroads, and to protect the public by requiring certain common carriers by railroad to install and maintain communication systems (Price of Illinois).

H. R. 300, to prohibit discrimination in employment because of race, creed, color, national origin, or ancestry (Dirksen of Illinois).

H. R. 302, to provide a basis for the settlement of industrial disputes vitally affecting the national health, security, or economy (Smith of Maine).

H. R. 505, to prohibit the transportation of certain inflammable textile fabrics in interstate commerce (Canfield of New Jersey).

H. R. 520, to amend the Railroad Retirement Act of 1937 so as to provide for an annuity for total and permanent disability after 10 years' service (Kefauver of Tennessee)

H. R. 536, to require common carriers by railroad to install reflectors on railroad cars (Sikes of Florida).

H. R. 601, to prohibit the transportation of certain highly inflammable textile fabrics in interstate commerce (Johnson of California).

H. J. Res. 2, prohibiting War Assets Administration from disposing of certain pine lines and facilities used for transporting oil until six months after final report and recommendation of the Federal Power Commission its Docket No. G-580 (the general "fact finding survey" of the natural gas situation) have been submitted to the Congress (Walter of Pennsylvania).

H. Con. Res. 5, to declare the date of termination of the wars in which the United States has been engaged since December 7, 1941 (Scrivner of Kansas).

H. Con Res. 6, creating a joint select committee to study and recommend legislation concerning labor relations (Smith of Virginia).

H. Con. Res. 9, to declare December 7, 1946, as the date of the cessation of hostilities in, and as the date of the termination of, the present war (Schwabe of Oklahoma).

H. Res. 20, to provide for a study and investigation of the service, operations, and administration of commercial air-transport companies in the United States and of their regulation by the Civil Aeronautics Administration (Smith of Maine).

H. Res. 35, authorizing and directing a study and investigation of all federal agencies dealing with labor matters, particularly labor disputes (Smith of Maine).

**Introduced in the Senate**

S. 1, to create an independent Civil Aeronautics Authority and an independent Air Safety Board, to promote the development and safety and to provide for the regulation of civil aeronautics, and to promote world leadership by the United States in aviation (McCarran of Nevada).

S. 6, to provide for censuses of manufactures, mineral industries, business and distribution, and transportation (McCarran of Nevada).

S. 46, to supplement the national transportation policy and to aid in achieving such policy (Hill of Alabama).

S. 55, to provide additional facilities for the mediation of labor disputes affecting commerce, to improve the procedures of collective bargaining, to equalize legal responsibilities of labor organizations and employers (Ball of Minnesota for himself, Taft of Ohio, and Smith of New Jersey).

S. 73, to provide additional facilities for the mediation of labor disputes (Morse of Oregon).

S. J. Res. 8, to provide for the incorporation and registration of labor organizations (Byrd of Virginia).

## Exceptions to Report on Refunds Filed by Pullman Company

The Pullman Company has filed with the Interstate Commerce Commission its exceptions to Examiner Charles W. Berry's proposed report in the No. 29590 investigation of Pullman's current refund tariff which became effective August 1, 1946. The Berry report was noted in the *Railway Age* of December 21, 1946, page 1063.

Along with the exceptions, Pullman submitted four suggested amendments to the tariff which would provide for (1) the refund of a ticket canceled on the day of departure if similar accommodations are available and had been available on the preceding day; (2) the ticket agent to refund a ticket canceled on the day of departure if he can verify that the space covered by that ticket had been sold before departure; (3) the ticket agent on the day of departure to exchange a ticket issued for accommodations on one train for accommodations on another train departing the same day on the same railroad and (4) a full refund from the point of resale where accommodations covered by a ticket canceled on the day of departure, or by an uncanceled ticket, are used by the Pullman conductor for the transfer of a passenger from other accommodations.

According to Pullman, the filing of the amended tariff will be deferred until the I. C. C. has had opportunity to consider it in connection with the recommendations and suggestions set forth in the examiner's report and its exceptions to the latter. Pullman said it believed the amendments would meet present traffic conditions and overcome the "imperfections" mentioned in the proposed report, while at the same time preserving the essential provisions of the tariff.

"The paramount need is for early release of space covered by tickets that will not be used," Pullman said. "When accommodations for which there is heavy demand have been sold, provision for refund should be held to closely-defined lines.

The examiner approves the essential requirement of the tariff, permitting refunds only when tickets are canceled a reasonable length of time before departure of the train. And he recommends a finding that the day-in-advance-of-departure requirement is reasonable. This essential element should not be weakened. . . ."

According to Pullman, the examiner's recommendation that the commission should find to be unjust, unreasonable, unduly preferential and prejudicial any arrangement or contract between Pullman and the railroads that permits the latter to reserve accommodations without the purchase of a Pullman ticket and which results in permitting any person to receive or enjoy greater or other privileges, immunities or preferences not accorded all passengers who purchase Pullman tickets is "unsound in law and impracticable in railroad and Pullman operation."

"The Pullman Company cannot permit or refuse to permit the railroads to handle reservations in any particular manner," the brief noted. "On the other hand, the railroads, under contract provisions, permit the Pullman Company to collect fares for use of accommodations. The Pullman Company's responsibility to the passenger begins with the sale of the sleeping car ticket. . . . The reservation of accommodations in advance of the purchase of a ticket is a railroad function. No ticket is sold. No money is paid. No refund is involved. The exercise of that function is outside the field occupied by Pullman in performing its part in serving the traveling public.

"The refund tariff which is the subject of this investigation contains no provisions with respect to reservations made in advance of the purchase of sleeping car tickets. The regulations of the railroads were not and are not under investigation. Until a ticket is purchased there is no payment of money, there is nothing to refund, and the refund rules are not applicable. . . ."

Pullman also found to be impracticable from a traffic standpoint Examiner Berry's recommendation that the commission find unjust and unreasonable the failure to incorporate a rule providing for the redemption of tickets for accommodations in Pullman cars where the space is released at origin in time to permit release within the time limits at intermediate stations at which there is reasonable expectation of resale.

With respect to the examiner's suggestion that the tariff should provide a rule whereby a refund will be made to the purchaser of the released space on the basis of the amount received from the sale of the similar accommodations in cases where a unit of space of the same kind which had not been sold at the time of the cancellation is sold before the released unit, Pullman commented that such a rule would "further remove the incentive for early cancellation" and would be "unfair and unreasonable."

Referring to another of the examiner's suggestions that a rule be incorporated in the tariff whereby car service employees would, upon examination of car diagrams, resell accommodations in order of their cancellations before they sell similar units that have not previously been sold, Pullman said that the maintenance of a tariff rule would "add nothing" to the present practice of the company. With respect to another Berry suggestion which would make the period within which tickets may be redeemed not later than 6 p.m. (or some other specific hour) the day in advance of the departure of the train for which the ticket is sold or by making it the day in advance but not later than six hours previous to the departure of the train for which the ticket is sold, Pullman said that such a suggestion would have application only to accommodations which would be taken at passing stations.

It went on to explain that the principal demand for accommodations is at terminals where the car starts.

## I.C.C. Can't Change Seatrain Certificate

(*Continued from page 154*)

a ruling to the effect that "freight car ferry service is a special kind of transportation not embraced within the term 'transportation of commodities generally' by water." Seatrain's original certificate had been awarded to it in 1942 on the basis of its seagoing car-ferry operations between New York and New Orleans, La., and Texas City, Tex., via Havana, Cuba.

In its report ordering substitution of the restricted certificate, the commission relied on its power to "correct" a certificate and to modify its outstanding orders. Also, it cited that provision of the Seatrain certificate which made it subject to "such terms, conditions, and limitations as are now, or may hereafter be, attached to the exercise of such authority by this commission."

**No "Inadvertence"**—With respect to the first of the foregoing, the court said that it need not determine the commission's statutory power to correct "clerical mistakes," since it was "persuaded . . . that the issuance of the original certificate was not an 'inadvertent' error which the commission's subsequent action was intended to correct." The court went on to note that the Seatrain application was not reopened for reconsideration until after the commission had decided the Foss case. "Thus it seems apparent," it continued, "that the Seatrain proceedings were reopened not to correct a mere clerical error, but to execute the new policy announced in the *Foss* case."

The court then proceeded to consider whether the commission's action could be sustained on the basis of its authority to modify certificates and there came the reference to the commission's relatively limited power over water carrier certificates, as noted above. Also cited by Justice Black was the Interstate Commerce Act's section 309 (d) relating to water carrier certificates which "specifically provides 'That no terms, conditions, or limitations shall restrict the right of the carrier to add to its equipment, facilities, or service within the scope of such certificate, as the development of the business and the demands of the public shall require. . . .'"

**Truck Rulings Not Applicable**—In view of the difference between the foregoing and the certificate provisions of the Motor Carrier Act, the court stated that its decisions relating to the commission's power as to motor carriers in this respect are not controlling as to the commission's power to regulate the details of the service of water carriers. "We find no authority for alteration of Seatrain's certificate from the commission's power to fix 'terms and conditions,'" the court added.

Finally, the court found that the commission's ruling was not justified on the basis of its authority as set forth in section 315(c), to modify outstanding orders with respect to water carriers. "That the word 'order,' as here used, was intended to describe something different from the word certificate used in other places, is clearly shown by the way both these words are used in the act." the court went on. "It is clear that the 'orders' referred to in 315 (c) are formal commands of the commission relating to its procedure and the rates, fares, practices, and like things coming within its authority. But, as the commission has said as to motor carrier certificates, while the procedural 'orders' antecedent to a water carrier certificate can be modified from time to time, the certificate marks the end of that proceeding.'"

## Probe of Drayage Agreements Urged by Western Roads

Western railroads have asked the Interstate Commerce Commission to institute, on its own motion, an investigation as to contracts and practices affecting pick-up and/or delivery of less-than-carload freight between warehousemen and their affiliated draymen and railroads and motor carriers in order that "the entire practice may be presented and definite and specific rules, regulations and practices set forth by the . . . commission, rather than have a multitude of different opinions, which do not make for uniformity and fair competitive conditions."

The petition is the result of a letter wherein the director of the commission's Bureau of Inquiry called the railroads' attention to July 8, 1946, decision by the United States district court for the northern district of Oklahoma, which upheld commission contentions that motor carriers must not pay warehouses greater allowances than are available to individual shippers and receivers for picking up and delivering freight at carrier stations. (See *Railway Age,* July 20, 1946, page 102). The letter asked the railroads to advise the commission "whether or not the rail carriers which have engaged in this practice will abide by the ruling in the . . . proceeding and discontinue the payment to warehouse companies or other agents of shippers any compensation in excess of their published allowances."

"Since receipt of such letter . . . ," the petition noted, "the western railroads have made a survey of and have given careful consideration as to their contracts and practices with respect to pick-up and delivery of l.c.l. freight. We find innumerable situations in the Western district as to arrangements for pick-up and delivery services with warehousemen and/or their affil-

iated drayage companies which the rail carriers believe to be lawful and which do not come within the purview of the court's decision."

The petitioners added that in order to place the railroads on a "common footing" with regard to pick-up and delivery service at common points, the commission's investigation should not conflict with its general investigation in the Nos. 29555 and MC-C-542 proceedings, relating to pick-up and delivery services by railroads and motor carriers, which has been scheduled for hearing at Chicago, Ill., on February 18. They said that such a separate investigation as to contracts affecting pick-up and delivery of l.c.l. freight between warehousemen and the railroads and motor carriers would undoubtedly be decided long before the general investigation in Nos. 29555 and MC-C-542.

"It is understood," the petitioners concluded, "that the Local Cartage National Conference of the American Trucking Associations has requested the commission to hold in abeyance any policy actions under the so-called Tulsa decision until the commission has entered its decision in the Nos. 29555 and MC-C-542 proceedings. This would indicate that the truck lines seek to have included in the investigation of pick-up and delivery service the question of contracts and practices with warehousemen."

## Must Keep Truck-Competitive Rates on Feed Grains

Partly because they failed to present a united front on the proposed cancellation, railroads operating in Western Trunk-Line territory have been required by the Interstate Commerce Commission to maintain truck-competitive rates on coarse grains for feeding, including corn, oats and barley, and certain of their products, and sorghum grains. Six roads proposed to cancel the rates while 15 planned to continue them subject to certain minima, in which connection the commission noted that the rates had been established as a unit by the carriers and added that to permit piecemeal cancellation "would turn our permissive authority into a vehicle for the creation of unlawful and intolerable rate situations."

The report in I. & S. Docket No. 5350 calls for continuance of the competitive adjustment under new tariffs which are to be published without an expiration date and framed to eliminate "inconsistencies" resulting from the present set-up. The report says that such inconsistencies "are due in large part to respondents' somewhat arbitrary selection of origin and destination territories." The rates now apply from an origin territory consisting of the western half of Iowa, the southeastern corner of South Dakota and the southwestern corner of Minnesota to a destination territory consisting of all points in Kansas and a portion of southwestern Missouri.

They were originally established on June 1, 1941, "to meet an itinerant trucking situation which was aggravated by the then-existing drought conditions," and have since been continued from time to time by extending the expiration date. Because the rates were in contravention to the general grain rate adjustment wherein the commission required parity of rates on wheat and coarse grains, it was necessary to have commission authority for the departure. Such authority was originally granted, but in 1943 the commission refused to extend it; and the carriers thereupon filed tariffs proposing to cancel the truck-competitive rates as of July 1, 1943.

The commission suspended these tariffs and followed through in an April, 1944, decision to require their cancellation. In November, 1944, it vacated the parity requirement of the general grain-rate adjustment, and then came an unsuccessful carrier-shipper effort to work out a "satisfactory adjustment" with respect to the truck competitive rates. The six respondents in the present proceeding then filed their tariffs proposing to cancel the rates on June 30, 1945. The commission suspended these tariffs until January 30, 1946, and the respondents voluntarily postponed them further until January 1, 1947. Meanwhile, the commission last July instituted an investigation of the temporary emergency rates on coarse grains of the 15 western roads which did not join in the cancellation proposal. The present report was accompanied by an order vacating the order instituting that investigation, which was docketed as No. 29595.

In requiring continuance of the competitive adjustment with "inconsistencies" removed, the commission conceded that the rates involved can not be regarded as reasonable maximum rates, but it called them "the only rates that will move the traffic when the unusual competitive conditions that prompted their establishment are present." The finding that the new tariffs should be published without an expiration date is based on evidence which the commission interpreted as indicating "no early change in conditions which would support withdrawal of a truck-competitive level of rates for this traffic."

"Prior to the establishment of these so-called emergency rates the movement was almost wholly by itinerant merchant trucks," the report had previously said. "The evidence now shows that if these rates are canceled the traffic, when offered, will again move by truck. It is clear, therefore, that if respondents are to participate in this traffic, they must maintain rates which will meet this truck competition. Their present rates have kept traffic on the rails."

## Promulgates General Rules for Determining Commercial Zones

Making what it regards as the only practicable approach to the task of administering the Interstate Commerce Act's section 203(b)) Division 5 of the Interstate Commerce Commission has evolved general rules to determine limits of the zone commercially a part of any municipality, except those excluded from the scope of the present report and those for which commercial zones have heretofore been determined specifically. Section 203(b) provides that transportation by motor vehicle within a municipality or between contiguous municipalities, or within a zone commercially a part of any such municipality or municipalities, shall be conditionally exempt from regulation except as to qualifications and maximum hours of service of employees and safety of equipment.

Division 5's report, dated November 26 and made public last week, is in Ex Parte No. MC-37, the proceeding instituted by the commission upon its own motion for the purpose of making the generally-applicable determination with respect to commercial zones; and also to provide a like basis for the administration of section 202(c) by establishing general rules for determining the maximum terminal area which a motor carrier or freight forwarder properly may establish at any point authorized to be served. The report deals only with the commercial-zone phase of the proceeding, leaving the matter of maximum terminal areas of motor carriers for further consideration.

**Specifications** — The commercial-zone specifications set up in the report are more liberal than those recommended by Examiner W. T. Croft in his proposed report, which was noted in the *Railway Age* of July 15, 1944, page 135. The commission's finding is that, aside from those specifically exempted by the present report or previously determined in other reports, the commercial zone of each municipality in the United States shall consist of: (1) The municipality itself, hereinafter called the base municipality; (2) all municipalities within the United States which are contiguous to the base municipality; (3) all other municipalities within the United States and all unincorporated areas within the United States which are adjacent to the base municipality and within specified distances from its corporate limits.

In the latter connection the specified distance limits are two miles where the base municipality has a population of less than 2,500; three miles where the population is between 2,500 and 25,000; four miles where it is between 25,000 and 100,000; and five miles where it is 100,000 or more. Also in a base municipality's commercial zone are all municipalities wholly surrounded except for a water boundary, by the base municipality, by any United States municipality contiguous thereto, or by any United States municipality adjacent thereto which is included in the commercial zone of the base municipality under the foregoing specifications.

"In the application of the foregoing findings," the report said, "air-line distances about corporate limits of municipalities shall be used and the population of any municipality which is under consideration, shall be deemed to be the population shown for that municipality in the last decennial census. If by reason of unusual growth since the last decennial census figures were gathered, the commercial zone of any particular municipality is unduly restricted by these findings a petition for further consideration of such matter may be filed."

The report's definition of the term municipality is that it "means any city, town, village, or borough which has been created by special legislative act or which has been, otherwise, individually incorporated or chartered pursuant to general state laws, or which is recognized as such, under the constitution or by the laws of the state in which it is located, and which has a local government. It does not include a town of the township or New England type."

**Exempted Points** — Generally the

points exempted by the report from its findings are those with respect to which individual consideration had been requested by interested parties. They include the New Jersey-New York City area; Pittsburgh, Pa.; Detroit, Mich.; Baltimore, Md.; Albany, N. Y., and Troy; Louisville, Ky.; New Orleans, La.; Cleveland, Ohio; Seattle, Wash.; St. Paul-Minneapolis, Minn.; Portland, Ore., and Vancouver, Wash. With respect to future exceptions, the commission gave assurances that if the findings proved inappropriate for application at particular points, interested parties might petition for further consideration of the matter.

As indicated above, the report's findings do not apply to several other points with respect to which the commission has already determined the commercial zones in individual reports. Those points are New York, Chicago, Philadelphia, Pa., St. Louis, Mo.-East St. Louis, Ill., Los Angeles, Calif., Kansas City, Mo.-Kansas City, Kans., Boston, Mass., Washington, D. C., Cincinnati, Ohio, and Davenport, Iowa-Rock Island, Ill., and Moline. Explaining the abandonment of this piecemeal approach, the present report stated that a special proceeding to determine the commercial zone of every municipality in the country would embark the commission upon a course which would be "prohibitively burdensome and wholly impracticable."

## Final Briefs Filed with I. C. C. in Pullman Acquisition Case

Final briefs in the No. 29592 proceeding, wherein a so-called buying group of 46 railroads seeks Interstate Commerce Commission approval of its plan to purchase the sleeping car business of the Pullman Company, have been filed with the commission by the applicants and the intervening parties, the latter including the Department of Justice, the Chesapeake & Ohio and its affiliated roads and Otis & Co. Hearings in the proceeding before Examiners Howard Hosmer and O. G. Barber were concluded November 27, 1946, as noted in *Railway Age*, December 7, 1946, page 976.

The applicants filed a 68-page brief defending their plan as one which would be in the interest of better service to the public and economy in operation, while not unduly restraining competition.

"The great majority of the railroads are now proposing to operate a part of their passenger transportation service—the sleeping car service—on a unitary or pooled basis," the brief said. "All parties to this record have agreed that the business is one that at least for the present can be more economically and efficiently operated as a whole rather than separately by each railroad. Applicants seek to accomplish this through a company owned and controlled by substantially all railroads that use the service.

**No Constraint**—"The applicants' sleeping car company will offer uniform and non-discriminatory contracts to all railroads. Each railroad will be free to use the service, or to operate its own service, or to contract with others for the service. Each railroad will still have full incentive to obtain for itself all the sleeping car traffic that it can. It is submitted that this proposal will in no way restrain competition, and on the contrary will preserve and foster competition more fully than any other method of operating the business that might have been selected."

The applicants also commented on the Justice Department's appeal to the Supreme Court of the United States from the federal district court decision approving the Pullman sale to the carriers. They further contended that their application is "within the meaning" of Section 5(1) of the Interstate Commerce Act; that the commission's jurisdiction under Section 5(1) of the act extends to the entire transaction involved in the application; and that the commission's jurisdiction is not removed or suspended by the appeals now pending in the Supreme Court.

The Department of Justice, which filed a 47-page brief, asked the commission to find that (1) the latter is without jurisdiction to approve the railroads' application; (2) in view of the proceedings still pending before the Supreme Court, the commission should not act on the application; (3) the railroads' proposal would unduly restrain competition and is not in the public interest; and (4) no showing has been made that the proposal will not unduly restrain competition and is in the public interest.

"It is equally clear and inescapable that the commission has no authority under Section 5 (1) of the . . . act . . . to make any findings or to issue any order authorizing or approving the acquisition by the applicants of the stock of the Pullman Company or its property. If the commission has any authority to make any finding . . . authorizing or approving . . . the acquisition . . . such authority is found only in Section 5(2) of the . . . act, and then only if the Pullman Company is a carrier by railroad. . . . No provision of Section 5(1), or, for that matter, any other section of the . . . act, gives to the commission any jurisdiction or power to approve or authorize the acquisition of a non-carrier by a group of carriers."

**Views of C. & O. Group**—Asserting that the transaction is not "pooling" within the meaning of Section 5(1) of the act, the C. & O. which also expressed the views of the New York, Chicago & St. Louis and the Pere Marquette, declared further that the commission is without authority to approve the proposed acquisition.

"The transaction . . . is not a pooling, but rather a purchase of all the capital stock of the Pullman Company, plus a lease of equipment to the Pullman Company," the C. & O. said in part, adding that if the commission determines that the railroads' application is "properly brought" under Section 5(1) of the act, it must find that the proposed agreements will be in the interest of better service to the public or economy of operation and will not unduly restrain competition. "Under the evidence," the C. & O. commented, "no such findings can be made."

Otis & Co., which joined in the motion of the Justice Department to dismiss the railroads' application, said it intervened because it is a party to the proceedings before the Supreme Court. It charged that an administrative agency, such as the commission, should not "voluntarily seek to anticipate the functions of our highest judicial tribunal and enter an order, the effect of which may be rendered nugatory by the court's decision."

"The Philadelphia district court found that a pool of sleeping cars available to all carriers alike for seasonal needs and through-line service is a modern essential, and therefore an economic necessity," the Otis & Co. brief continued. "Yet, the applicants' proposal is devoid of any definite assurance that such a pool will be maintained. The evidence is to the contrary. The evidence . . . gives added force to the testimony that the applicants' purpose is to strip Pullman of its sleeping cars, reduce it to a chambermaid service and then sell it to someone satisfactory to them. Thus, the smaller passenger-carrying railroads, unable to purchase sleeping cars for their needs, and dependent upon the larger roads for such facilities, would become the economic captives of the larger roads."

Charging further that the railroads' proposal is contrary to the federal anti-trust laws, Otis & Co., which, among others, offered to purchase Pullman at the time of the district court proceedings, asserted also that the sale of Pullman to the buying group would "perpetuate a monopoly" in the business of furnishing and servicing sleeping cars.

## Passenger Fare Increase Sought by New Haven

The New York, New Haven & Hartford this week asked the Interstate Commerce Commission for authority to increase its passenger fares at the "earliest date possible" in order to offset an estimated 1947 net income deficit of $7,125,000. The tariffs, which the New Haven seeks to make effective on five days' notice and which it estimates would produce added revenues of approximately $6,570,000 yearly, propose to increase coach fares from 2.2 cents per mile to 2.5 cents and parlor and sleeping car fares from 3.3 cents to 3.5 cents. Also proposed is a 20 per cent increase in commutation fares. The increases would apply to both local and interline fares.

The New Haven told the commission that each week of delay in acting upon its petition would deprive it of approximately $126,000 in added revenues. It said that the proposed increases would result in additional yearly revenues of $4,775,000 in coach fares; $495,000 in parlor and sleeping car fares and $1,300,000 in commutation fares.

According to the petitioner, whose plan to seek the increase was noted in *Railway Age* of January 4, page 114, its estimated passenger revenues for 1947 will total $51,150,000, as compared with $60,550,000 in 1946 and $76,500,000 in 1945. The road said that 48 per cent of its total 1946 operating revenue was derived from passenger business. It predicted that its 1947 operating expenses would be approximately $7,500,000 in excess of its anticipated revenues as the result of wage increases, higher costs of materials and supplies and added retirement system taxes under the Crosser act.

The road also disclosed that it has on order approximately $16,660,000 of new equipment, including 27 sleepers, 103 coaches, 20 parlor-lounge-baggage cars, 25 parlor cars, 5 parlor-lounge cars, 10 dining cars, 15 grill cars and 2 tavern-observation-lounge cars.

# Supply Trade

**C. Huizing,** formerly sales engineer for the **Watson-Stillman Company,** has been appointed New England representative for the firm.

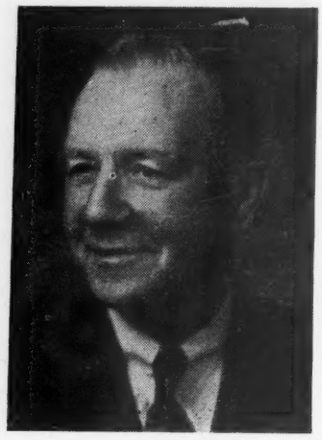
**Herbert M. Lewis,** vice-president and general manager of the **Durametallic Corporation of New Jersey,** with headquarters at Newark, N. J., has retired.

**Edward A. Sipp,** whose appointment as manager, Railway division of the **Reynolds Metals Company,** with headquarters at Chicago, was reported in *Railway Age* of December 14, 1946, was born at Watertown, Wis., and was graduated from the University of Wisconsin. For several years Mr. Sipp served as a civilian engineer with the United States Army Air Corps, and later he joined the Burgess Battery Company at Madison, Wis., where his work consisted of company reorganization, research and the development and marketing of new products. He subsequently became associated with the Pyle-National Com-

**Edward A. Sipp**

pany, Chicago, holding for 13 years the position as manager, research department. Prior to joining the Reynolds Metals Company in July, 1946, he was contact executive for the Gustin-Bacon Manufacturing Company at Chicago, handling engineering and sales promotion in heavy industries, particularly railroads, machinery and aircraft. Mr. Sipp holds patents in acoustic and air distribution systems, lighting equipment and electrical control.

**M. H. Roberts** has been appointed vice-president of the **Walter A. Deems Company,** dealers in railroad and industrial equipment and supplies. Mr. Roberts was formerly vice-president in charge of engineering and technical adviser to the sales department of the Franklin Railway Supply Company. During his long career with that company he also served as consulting engineer to the United States government, as chairman of the Board of Helium Engineers, and chairman of the government committee for the study of the production of cheap oxygen and its possible use in metallurgical work. In 1935 he spent some time in Europe studying turbine-driven locomotives and investigating the possibilities of poppet-valve steam distribution for steam locomotives, especially the work of Andre Chapelon. Before joining Franklin Railway Supply, Mr. Roberts served for over three and one half years as chief en-

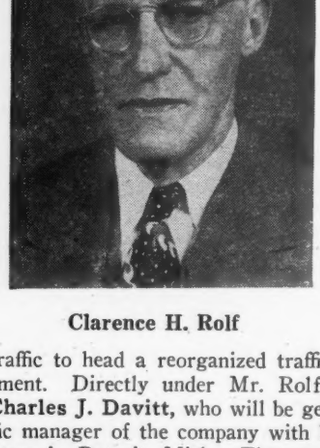


**M. H. Roberts**

gineer, automotive division, of the American Locomotive Company. For four years he was with the Air Reduction Company, for which he served as chief engineer, production manager, and sales assistant. He developed and built many of the Air Reduction plants and their equipment, including the oxygen and nitrogen plants operated by the government in World War I and one of the three experimental plants in Texas for the production of helium.

**Samuel L. H. Burk** has been appointed director of industrial relations for the **Pittsburgh Plate Glass Company,** to succeed **Erson V. Ogg,** who has resigned. Mr. Burk was formerly director of organizations and methods for the Atlantic Refining Company.

**Clarence H. Rolf,** general traffic manager of the **Budd Company** since 1917, before which he was with the New York Central system as general agent in Philadelphia, Pa., has been appointed director



**Clarence H. Rolf**

of traffic to head a reorganized traffic department. Directly under Mr. Rolf will be **Charles J. Davitt,** who will be general traffic manager of the company with headquarters in Detroit, Mich. The reorganization of the department includes the appointments of the following traffic managers for each of the Budd plants: **T. A. Klaus** for the Hunting Park plant, Philadelphia, Pa.; **Edward D. Heilbrun,** for the Red Lion plant, Bustleton, Pa.; and **W. J. Buchanan** for the Charlevoix, Atwater and induction heating plants in Detroit.

**Hayes Manufacturing Corporation,** Grand Rapids, Mich., has purchased the **American Engineering Company** and its subsidiaries, which will continue to operate under its own name. New officers of American Engineering are as follows: **Rensselaer W. Clark,** president, general manager and director of Hayes Manufacturing for the past five years, has been elected president, retaining his headquarters at Grand Rapids; **Edgar Washburn** has been elected vice-president and general manager, and **J. S. Bennett,** associated with American Engineering since 1919, has been re-elected vice-president. **E. H. Glaettli,** controller of Hayes Manufacturing, has been elected controller, with headquarters at Grand Rapids.

**John E. Long,** formerly general sales manager of the **Franklin Railway Supply Company,** New York, has been appointed

**John E. Long**

vice-president in charge of domestic sales. Mr. Long was graduated from Purdue University in 1923 with a degree in mechanical engineering and joined the Lima Locomotive Works the same year, serving in the calculating, service, engineering and sales departments. He entered Franklin's Chicago office in 1934. In 1939 he was appointed western sales manager and, in 1944, general sales manager.

**Robert C. Judd** has been appointed market research manager of **R. G. LeTourneau Inc.,** Peoria, Ill., replacing **Wendell Richards,** who resumes his duties as district sales representative.

**S. B. Williams,** editor of the Electrical World for the past eight years, has been appointed manager of customer relations for the lighting division of **Sylvania Electric Products Inc.**

**F. R. McMillan,** director of research of the **Portland Cement Asociation,** 33 West Grand avenue, Chicago, has been appointed assistant to the vice-president for research and development. **H. F. Gonner-**

man, manager of the association's research laboratory, becomes director of research. **William Lerch,** senior research chemist in the Chicago laboratory, has been appointed manager of the department of applied research.

The **Lodge & Shipley Co.,** Cincinnati, Ohio, has acquired the turret lathe and hand screw machine business of the **Acme Machine Tool Company,** also of Cincinnati, the companies have jointly announced.

The **Reynolds Metals Company** has acquired the government-owned Newark, Ohio, aluminum rolling mill from the War Assets Administration, R. S. Reynolds, Sr., president of the company, has announced.

The **Vanadium Corporation of America** has announced the appointment of **Harry E. Orr** as general manager of operations of its Bridgeville, Pa., and Niagara Falls, N. Y., plants.

**A. A. Bareuther** has been appointed manager of the rail and fastenings department of **Robert W. Hunt Company,** Chicago. He was formerly manager of the company's office at St. Louis, Mo.

The **A. O. Smith Corporation** has announced the appointment of **George P. Hough** as executive administrator of its Chicago district, to succeed **Don T. Allen,** who recently resigned. Mr. Hough was formerly assistant administrator in direct charge of certain sales activities.

**William G. Johnstone,** assistant general traffic manager of the **Armstrong Cork Company,** has retired after nearly 29 years' service. Mr. Johnstone started his business career with the Cleveland, Cincinnati, Chicago & St. Louis, and before joining Armstrong had served with the Illinois Central in its Pittsburgh, Pa., district office.

**Dr. Robert H. Aborn** has been appointed assistant director of research laboratory of the **United States Steel Corporation,** at Kearny, N. J. **Harry E. Lorenz,** assistant purchasing agent of the Chicago district, has been appointed purchasing agent of the affiliated Carnegie-Illinois Steel Corporation, with headquarters at Pittsburgh, Pa. **C. H. Baringer** and **F. G. Buchheit** have been appointed assistant purchasing agents.

**Ray L. Rex** has been appointed general superintendent of railroad service for the **Air Reduction Sales Company,** with headquarters in New York, and will report to G. V. Slottman, manager of the technical sales division. Mr. Rex entered railroad service in 1919 with the Lehigh Valley and from 1928 to 1940 he served as engineer-in-charge of the Perth Amboy (N. J.) Terminal. In 1942, he joined the New York, Ontario & Western as mechanical assistant to the superintendent of motive power.

The **Canadian Car & Foundry Co.** has reported that its net profit for the fiscal year ended on September 30, 1946, totaled $1,215,538, compared with $1,217,491 for the preceding fiscal year. Current liabilities at the end of the fiscal year were $11,379,574, compared with $8,488,322. Current assets were $17,754,321, compared with $16,139,942. Orders on hand, the report said, will occupy the bulk of the company's facilities for the first few months of 1947 and the prospects for domestic and export work for the remainder of the year are good.

**R. G. LeTourneau Inc.,** Peoria, Ill., has announced the establishment of a full export division vested with corporate authority to perform all export functions. The new division, shortly to be transferred to New York, will be under the direction of the following executive personnel: **Paul E. Fulford,** manager; **Paul M. King,** assistant manager in charge of sales; **L. L. Petefish** and **R. P. Nichols,** assistant sales managers; **E. P. Sandmeyer,** credit manager; **Willard Arnold,** office manager; and **George Rosewall,** traffic manager.

**R. S. Keefer,** formerly sales manager for the **Okonite Company,** Passaic, N. J., has been appointed vice-president in charge of sales. Mr. Keefer will be responsible for directing all sales activities of the Okonite Company, its Hazard insulated wire works division and those of its affiliate, the Okonite-Callender Cable Company.

The company also has announced the following changes: **F. E. Bankwitz** has been appointed manager of the Washington, D. C., office, to replace **R. Soutter,** who has been granted a leave of absence, effective March 1; **D. W. Nurse,** formerly of the San Francisco, Calif., office, has been appointed manager of the Portland, Ore., office, and **W. R. Van Steenburgh** has been appointed manager of the New York territory, with headquarters at 501 Fifth avenue. He will continue as manager of the company's light and power department.

# Equipment and Supplies

## Seaboard to Spend $41½ Million on Equipment

The Seaboard Air Line has authorized the purchase of 500 box cars, 175 phosphate cars and 10 Diesel-electric locomotives, of which 6 will be road engines and 4 will be switchers. The cost of the new equipment was estimated to be between $4,000,000 and $4,500,000.

## LOCOMOTIVES

The LEOPOLDINA (Brazil) has ordered 8 steam locomotives of the 2-8-2 type from the Baldwin Locomotive Works. The locomotives, to cost over $500,000, will be used in freight service. Delivery is scheduled for mid-1947.

The tractive forces of the 10 steam locomotives which the CHESAPEAKE & OHIO intends to purchase were inadvertently transposed in the story on page 121 of last week's *Railway Age.* Each of the five 4-8-4 engines will have a tractive force of 80,200 lb. and the tractive force of each of the 4-6-4 engines will be 64,700 lb.

## SPECIAL

The TURKISH STATE RAILWAYS has purchased from the Nichols Engineering Company, Chicago, four complete transfer tables to be assembled in Turkey. Three of the tables will be used for the handling of cars and one for the transfer of locomotives.

# Abandonments

PITTSBURG, SHAWMUT & NORTHERN.—Division 4 of the Interstate Commerce Commission has conditionally authorized the trustees of this road to: (1) Abandon the entire line from Wayland Junction, N. Y., to Hyde, Pa., 144.5 miles, together with branch lines extending from Prosser, N. Y., to Olean, 9 miles; from Kasson, Pa., to Marvindale, 1.88 miles, and from Horton City, Pa., to Drummond, 0.88 miles; (2) abandon operation over the Kersey, a wholly owned subsidiary, from Paine, Pa., to Cardiff, 12.18 miles, together with branch lines extending from Force, Pa., to Tyler, 2.87 miles, and from Weedville, Pa., to Browns Run, 1.75 miles; (3) abandon operation under trackage rights over the Delaware, Lackawanna & Western from Wayland Junction to Wayland, 1.26 miles, and over the Erie from Hyde to Broadway, 6.17 miles, and from Brockport, Pa., to Horton City, 2.41 miles; and (4) abandon operation under lease over a line of the Rochester, Hornellsville & Lackawanna, owned by the American Red Cross, from Moraine, N. Y., to Hornell, 9.31 miles. At the same time, the commission authorized the Kersey to abandon its lines.

The abandonment was approved subject to the condition that the P. S. & N. and Kersey properties, or any portion thereof, be sold to any responsible person or corporation offering within 45 days of the date of the abandonment certificate (December 26, 1946) to purchase them for continued operation and willing to pay not less than the net salvage value. Municipalities and industries served by the applicant were the principal protestants against the abandonment.

"The record affords no ground upon which to base a conclusion that the railroad properties . . . can be operated profitably," the division said. "It would seem that the Northern's struggle to exist during the past 40 years or more, coupled with its inability to pay any interest on its outstanding bonds during that time, or any interest on its receivers' certificates for the past 14 years, has demonstrated beyond doubt that the line cannot be operated at a profit and that its future is hopeless. A railroad, such as the Northern, without funds to meet its operating needs, whose credit has become exhausted to the extent that it is unable to borrow money to meet such needs, and which must depend upon the collection of prepaid freight revenues from month to month in order to remain in business, cannot be expected to continue operation indefinitely even though certain industries may be dependent upon its services. It is well settled that no carrier by railroad can be

compelled to continue operations at a loss. . . .

"It is clear that neither the present nor prospective volume of traffic is sufficient to warrant retention of the line and that continued operation would impose an undue and unnecessary burden upon the applicants and upon interstate commerce."

# Financial

ALABAMA GREAT SOUTHERN. — *Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $1,520,000 of Series J equipment trust certificates, the proceeds of which will be applied toward the purchase of 50 all-steel, 70-ton ballast cars, at approximately $4,700 each, from the American Car and Foundry Company, and 4 4,500-hp. Diesel-electric freight locomotives, at approximately $418,000 each, from the Electro-Motive Division of the General Motors Corporaton. The certificates would be sold on the basis of competitive bidding.

BALTIMORE & OHIO.—*Equipment Trust Certificates.*—This road has announced the acceptance of a bid of 99.401 per cent by Halsey, Stuart & Co. for $3,310,000 of series S equipment trust certificates. Yearly interest on the certificates, which will be payable in ten equal annual installments, will be 2 per cent, representing an interest cost to the B. & O. of 2.11 per cent.

BARRE & CHELSEA.—*Control.*—A group including the Rock of Ages Corporation, the Wells Lamson Quarry Company and representatives of the J. K. Pirie estate, Vermont quarrying concerns, are reported to have purchased a majority of this road's common stock from the estate of the late Alvin F. Sortwell, who is understood to have owned 60 per cent of the outstanding common stock. The report added that the purchase is a move to assure continued operation of the road and its Montpelier & Wells River branch.

BESSEMER & LAKE ERIE.—*Bonds of Pittsburgh & Lake Erie.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $12,000,000 of series A, first mortgage bonds, which the same decision authorized the P. B. & L. E. to issue. Also approved was a selling price of 98,8099 and accrued interest for the issue with a 2⅞ per cent interest rate, the bid of a syndicate headed by Halsey Stuart & Co., which had been accepted subject to commission approval and which will make the average annual cost approximately 2.92 per cent. As noted in the *Railway Age* of December 7, 1946, page 979, the proceeds will provide funds for the payment of existing indebtedness of the P. B. & L. E., including a $9,930,000 bond issue which matured January 1. The new bonds will be dated December 1, 1946, and will mature December 1, 1996. They will be redeemable at 105 and accrued interest to and including November 30, 1951, the redemption price decreasing gradually thereafter until it reaches par on December 1, 1993.

CHICAGO, BURLINGTON & QUINCY.—*Sells Bus Interest.*—This road has sold its remaining 49 per cent interest in Burlington Trailways, its former bus subsidiary, to American Buslines, Inc. The latter company had previously purchased 51 per cent of the Burlington Trailways for. $1,500,000. Completion of the present transaction removes the Burlington from the bus business entirely.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization Expenses.*—Division 4 of the Interstate Commerce Commission has approved $25,678 and $49,043 as the maximum limit of allowances and expenses for services rendered from October 9, 1945, to June 30, 1946, and to be rendered by the Continental Illinois National Bank & Trust Company of Chicago and the Guaranty Trust Company of New York, respectively, in the distribution of $34,279,750 of cash to holders of various securities in partial execution of the plan of reorganization of this road. The Chicago bank had submitted a claim of $29,345, while Guaranty was awarded the entire amount of its claim.

CINCINNATI, NEW ORLEANS & TEXAS PACIFIC.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $1,700,000 of Series K equipment trust certificates, the proceeds of which will be applied toward the purchase of 100 all-steel 70-ton ballast cars at approximately $4,700 each from the American Car and Foundry Company, and 4 4,500-hp. Diesel-electric freight locomotives, at approximately $417,500 each, from the Electro-Motive Division of the General Motors Corporation. The certificates would be sold on the basis of competitive bidding.

DES MOINES & CENTRAL IOWA.—*Trustee.*—Division 4 of the Interstate Commerce Commission has ratified the court's appointment of A. A. McLaughlin as trustee of this road which is undergoing reorganization under section 77 of the Bankruptcy Act (see *Railway Age* of November 23, 1946, page 904).

MISSISSIPPI CENTRAL.—*Refunding.*—This road seeks Interstate Commerce Commission authority to sell at par to the Reconstruction Finance Corporation $1,250,000 of 4 per cent 30-year first mortgage bonds, the proceeds of which would be applied toward the retirement of $1,437,100 of its outstanding 5 per cent first mortgage bonds, due July 1, 1949, and held by the United States Lumber Co. The applicant also proposes to substitute for its present outstanding 6 per cent second mortgage notes, due June 26, 1944, and December 26, 1944, a new note to the lumber company in the sum of $862,100. The latter note would bear interest at the rate of 4½ per cent, payable semi-annually, would mature in 10 years and would be amortized at the rate of $20,000 yearly, with the right to make further reductions.

MISSISSIPPI EXPORT.—*Notes.*—This road has applied to the Interstate Commerce Commission for authority to issue not exceeding $30,000 in 4-per cent, 4-year notes. As security for the notes, the applicant proposes to execute a chattel mortgage on its General Electric 70-ton Diesel-electric locomotive.

MISSOURI-KANSAS-TEXAS. — *Promissory Note.*—This road has applied to the Interstate Commerce Commission for authority to issue a $5,000,000 par value promissory note, to bear interest at a rate to be determined by competitive bidding. It would be payable in 22 consecutive quarterly installments of $175,000, with the balance of $1,150,000 to be payable three months after the final quarterly payment. The applicant also seeks authority to conditionally issue $10,000,000 of its prior lien mortgage 4 per cent gold bonds, Series F, and to pledge and repledge all or any part of the latter bonds as collateral for the note.

MISSOURI PACIFIC.—*Bond Tender Accepted.*—Guy A. Thompson, trustee of the Missouri Pacific, has announced the acceptance of about $889,000 of the road's 5¼ per cent secured serial gold bonds tendered recently at 100 per cent of face value or less. Tenders on Central Branch Union Pacific 4 per cent secured first mortgage gold bonds, on which holders asked more than 100 per cent, and the Louisville & Nashville's $1,699,000 of Cairo & Thebes 4 per cent first mortgage bonds, for which the L. & N. asked 98 per cent, were rejected as too high.

MONTOUR-YOUNGSTOWN & SOUTHERN.—*Sale.*—Division 4 of the Interstate Commerce Commission has approved the transaction whereby, the Pennsylvania and Pittsburgh & Lake Erie will buy these two roads from the Pittsburgh Consolidation Coal Corporation for $9,000,000. The same decision authorizes the P.R.R., P. & L. E. and the New York Central (as owner of the latter) to acquire control of the two roads through ownership of capital stock, subject to the usual employee-protection conditions. The commission also authorized the P. R. R. and the P. & L. E. to assume the Y. & S.'s outstanding indebtedness of $1,450,000 in promissory notes, including a 20-year 4 per cent secured note for $1,000,000 and a $450,000 unsecured 3½ per cent note. At the same time, it authorized the Y. & S. to acquire and operate a line of the coal company from Negley, Ohio, to Smith's Ferry, Pa., 12½ miles.

NEW YORK CENTRAL.—*Central Greyhound Stock.*—Orville S. Caesar, president of the Greyhound Corporation, has announced a tentative agreement by that company to purchase the minority interest in Central Greyhound Lines now held by the New York Central.

NEW YORK CENTRAL.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $20,000,000 of 2 per cent equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment, estimated to cost $27,261,000, as outlined in *Railway Age* of December 7, 1946, page 980. The certificates will mature in 10 equal annual installments starting January 1, 1948. The report also approves a selling price of 99.307, the bid of Halsey, Stuart & Co. and associates, on which basis the average

annual cost will be approximately 2.14 per cent.

SEABOARD AIR LINE.—*Equipment Trust Certificates.*—The directors of this road have authorized the asking of bids for $3,000,000 of equipment trust certificates to be secured by equipment already on order and which will cost approximately $4,000,000.

## Average Prices Stocks and Bonds

| | Jan. 7 | Last week | Last year |
|---|---|---|---|
| Average price of 20 representative railway stocks.. | 50.69 | 51.29 | 61.03 |
| Average price of 20 representative railway bonds.. | 91.34 | 91.48 | 100.67 |

## Dividends Declared

Cleveland, Cincinnati, Chicago & St. Louis.—$5.00, quarterly; preferred, $1.25, quarterly, both payable January 31 to holders of record January 17.

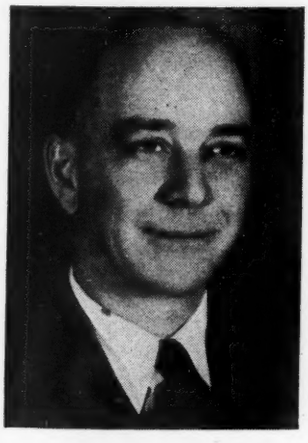
Pittsburgh, Cincinnati & St. Louis.—$2.50, semi-annually, payable January 20 to holders of record January 10.

South Western.—$2.50, semi-annually, payable December 31 to holders of record December 15.

# Railway Officers

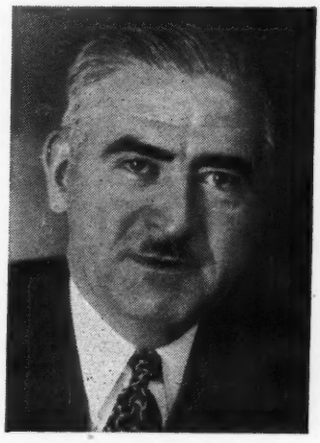
## EXECUTIVE

**Charles J. Geyer,** whose promotion to assistant vice-president of the Chesapeake & Ohio at Richmond, Va., was reported in the *Railway Age* of December 21, 1946, was born at Zanesville, Ohio, on April 6, 1889. He attended Marshall College, Huntington, W. Va., and entered railroad service in April, 1908, as rodman in the construction department of the Chesapeake & Ohio at Huntington, serving in that capacity until November, 1910, when he became instrumentman in the construction department at Cincinnati, Ohio. From May, 1914 to May, 1918, Mr. Geyer was assistant engineer maintenance of way of the system, becoming division engineer in that department on the latter date. He became assistant superintendent maintenance of way in February, 1924; engineer maintenance of way on October 8, 1926; assistant to vice-president on April 16, 1929, and engineer maintenance of way of the system on April 2, 1934. Mr. Geyer was appointed general manager of the Chesapeake & Ohio in March, 1943, which position he held until his promotion to assistant vice-president.



**Charles J. Geyer**

**Maynard A. Metcalf,** executive assistant to the president of the Canadian National, with headquarters at Montreal, Que., has been appointed vice-president and executive assistant, with the same headquarters. Mr. Metcalf was born at Toronto Junction, Ont., on December 23, 1895, and was educated in the Toronto public and high schools. He began railroading in February, 1910, when as a junior clerk, he entered the operating department of the Canadian Northern (now C. N. R.). Six years later he transferred to the general manager's office. From the position of clerk-stenographer he was promoted to secretary to the general manager in December, 1917, and less than a year later he became secretary to the assistant vice-president. In October, 1920, he became secretary to the vice-president in charge of operation and construction of the Canadian National. In 1923, following the consolidation of the Grand Trunk and other lines into the C. N. R., Mr. Metcalf went to Montreal as secretary to the operating vice-president of the system. He was appointed secretary to the acting president in 1932 and was secretary to the president from 1934 to 1936 when he was promoted to assistant to the president. He became executive assistant to the president in August, 1943. Mr. Metcalf served as mayor of the town of Mount Royal, a suburb of Montreal, from 1941 to 1945.



**Maynard A. Metcalf**

**Max R. Brockman,** assistant to vice-president (mechanical) of the Southern at Washington, D. C., has been promoted to assistant vice-president (mechanical), with the same headquarters. A photograph of Mr. Brockman and a sketch of his career were published in the *Railway Age* of October 12, 1946, page 621.

**N. R. Crump,** general manager of the Canadian Pacific, with headquarters at Toronto, Ont., has been promoted to vice-president and general manager of the eastern lines, with the same headquarters, succeeding **E. D. Cotterell,** who has retired on pension. Photographs of Messrs. Crump and Cotterell and sketches of their railroad careers were published in the *Railway Age* of January 19, 1946.

**Frank J. Goebel,** director of personnel of the Baltimore & Ohio, has been elected vice-president of personnel, with headquarters at Baltimore, Md. Mr. Goebel was born at Princeton, Ind., in 1893 and received his LL.B. degree from Indiana Law School in 1919. He entered railroad service in 1915 as secretary to the president of the Cincinnati, Indianapolis & Western (now Baltimore & Ohio), subsequently serving as secretary to treasurer, secretary and assistant counsel, secretary and general attorney, all with that road. From 1927 to 1940 he was assistant general solicitor of the Baltimore & Ohio at Cincinnati, becoming general counsel of the Dayton Union in the latter year. He was appointed director of personnel of the Baltimore & Ohio in 1944.

**Frank J. Goebel**

**Otto J. Smidl,** supervisor of contracts of the Chicago, Burlington & Quincy, with headquarters at Chicago, has been advanced to assistant to vice-president of operations (contracts), with the same headquarters.

**William C. Bower,** vice-president, purchases and stores, of the New York Central system, with headquarters at New York, has retired after 43 years of service with that road. **Fredolin F. Riefel,** vice-president, lines west of Buffalo, at Cleveland, Ohio, has retired after 53 years of service. **Jacob Aronson,** vice-president, law, has had his title changed to vice-president and general counsel of the system, having jurisdiction over the law, land and tax claim and medical and freight claim departments. **Frank A. Hasbrouck,** special assistant to vice-president at New York, has retired after more than 50 years of service. **Albert Rozell,** statistician at New York, has retired after almost 45 years of service.

**Frederick N. Reynolds,** assistant to vice-president and general manager of the Cleveland, Cincinnati, Chicago & St. Louis (part of the New York Central system) at Indianapolis, Ind., has retired after more than 33 years of service.

## FINANCIAL, LEGAL AND ACCOUNTING

**Robert E. Kennedy,** office engineer in the engineering department of the Baltimore & Ohio, has been appointed real estate agent, with headquarters at Balti-

**Robert E. Kennedy**

more, Md. Mr. Kennedy entered the service of the Baltimore & Ohio in 1901 as assistant on engineering corps, maintenance of way department. In 1910 he was transferred to the engineering department, and in 1914 he became chief of party in the valuation department, being promoted to pilot engineer in 1916. He was furloughed for army service during the latter year and upon discharge re-entered the valuation department, continuing therein until he was appointed special engineer in the office of the auditor of capital epenxditures. In 1941 he was appointed assistant to the chief engineer, becoming office engineer in January, 1943.

**Monta G. Mitchell,** whose promotion to auditor-treasurer-secretary of the St. Louis Southwestern of Texas, with headquarters at Tyler, Tex., was reported in the

**Monta G. Mitchell**

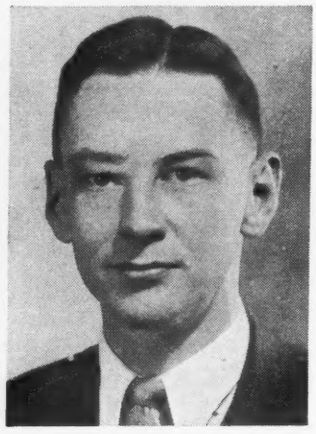
*Railway Age* of December 28, 1946, was born on February 28, 1898, at Chanute, Kan. Mr. Mitchell entered railway service in 1912 with the San Antonio & Aransas Pass (now part of the Southern Pacific system), remaining with that road in various positions until 1919. In that year he joined the St. L. S. W. of Texas as assistant inventory clerk at Tyler, and in 1930 he was advanced to auditor of disbursements. He held the latter position at the time of his appointment as auditor-treasurer, and his election as secretary by the board of directors.

**W. Angus Crosbie,** assistant to the comptroller of the Canadian Pacific, has been promoted to assistant comptroller, with headquarters as before at Montreal, Que., succeeding **W. R. Patterson,** whose retirement was reported in the *Railway Age* of December 21, 1946. **Howard C. Reid,** auditor of joint facilities, with headquarters at Montreal, has been promoted to assistant to the comptroller, to succeed Mr. Crosbie.

**W. Angus Crosbie**

**John C. Gilmer,** auditor of miscellaneous accounts at Montreal, has been appointed general auditor succeeding **James Lorimer,** who has been appointed auditor of disbursements. **Goldwin C. Brooks,** auditor of disbursements, has been appointed auditor of freight receipts. **Harry B. Timmins,** assistant auditor of miscellaneous accounts, has been promoted to auditor of miscellaneous accounts. **George W. Hardy,** chief joint facility accountant, has been promoted to auditor of joint facilities.

Mr. Crosbie was born at South Shields, England, and was educated in Calgary, Alta. He entered the service of the Canadian Pacific in 1934 and spent 20 months



**Howard C. Reid**

in accounting work for the Canadian Pacific Air Lines. Mr. Crosbie became auditor of miscellaneous accounts for the C. P. R. in the fall of 1945, becoming assistant to the comptroller a year later.

Mr. Reid was born at Regina, Sask., and was graduated from McGill and Yale Universities. He was general statistician for the Canadian Pacific from 1942 to 1945, being appointed auditor of joint facilities in the latter year.

**John C. Gilmer**

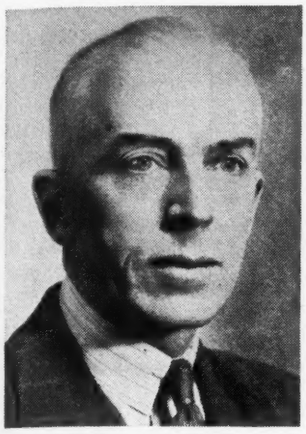
Mr. Gilmer was born at Belfast, Ireland, and was graduated from the University of Manitoba, Winnipeg, Man. He entered the service of the C. P. R. in 1937 and served as general tax accountant prior to becoming auditor of miscellaneous accounts in September, 1946, which position he held at the time of his recent appointment as general auditor.

Mr. Lorimer entered railroad service in April, 1907, as clerk in the superintendent's department of the Canadian Pacific at Winnipeg and served in that capacity until March, 1910, when he became superintendent's accountant there. From July, 1912, to August, 1920, Mr. Lorimer was chief clerk in the division accountant's department at Winnipeg, becoming division ac-

**James Lorimer**

countant there in the latter year. From January, 1933, to July, 1937, Mr. Lorimer served as general accountant at Winnipeg, then serving until November, 1939, as general statistician at Montreal. He was appointed general auditor at Montreal in November, 1939, holding that position until his recent appointment as auditor of disbursements.

Mr. Brooks was born at Sherbrooke, Que., and entered the service of the Quebec Central in 1912, serving that road until



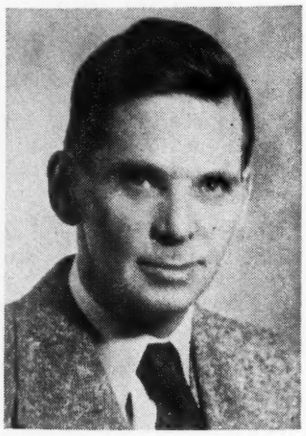
**Goldwin C. Brooks**

1934, when he joined the Canadian Pacific. He was appointed auditor of disbursements in December, 1943, which position he was

**Harry B. Timmins**

holding at the time of his recent appointment as auditor of freight receipts.

Mr. Timmins entered the service of the Canadian Pacific in 1898 at Montreal, going to Vancouver in 1910 as assistant ac-



**George W. Hardy**

countant. He returned to Montreal in 1935 and was appointed assistant auditor of miscellaneous accounts in 1944, from which position he has recently been promoted to auditor of miscellaneous accounts.

Mr. Hardy joined the Canadian Pacific in 1912 and has served at Revelstoke, B. C., and Cranbrook; Regina, Sask; Kentville, N. S.; Moose Jaw, Sask.; and Montreal. He was serving as chief joint facility accountant at the time of his recent appointment as auditor of joint facilities.

**William S. Chemidlin,** district claim agent of the Great Northern, with headquarters at Seattle, Wash., has retired upon completion of 40 years of service with the road.

**I. H. Cooper,** acting auditor of freight accounts of the Florida East Coast, with headquarters at St. Augustine, Fla., has been promoted to auditor of freight accounts.

**Crosby J. Beakes,** general counsel of the New York Central system at New York, has retired after 41 years of service with that road. **William J. Daeschner,** auditor freight accounts at Detroit, Mich., has retired after almost 40 years of service.

**Thomas H. Simpson,** whose retirement as treasurer of the Missouri-Kansas-Texas, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of January 4, was born on November 29, 1876, at Perryville, Mo., and began his railroad career with the Katy in 1895 as clerk in the treasury department at St. Louis. In 1900 Mr. Simpson was promoted to cashier in the office of the treasurer at Dallas, Tex., and in 1903 he was transferred to St. Louis in that position. From 1907 to 1923 he was treasurer of the road's Kansas company at Parsons, Kan. He became assistant treasurer of the Katy at St. Louis in 1923, in which capacity he served until 1936. In that year he was advanced to treasurer, the position he held at the time of his retirement.

**H. G. Hedrick,** assistant general solicitor of the Southern at Washington, D. C., has been promoted to general solicitor, with the same headquarters. **Henry L. Walker,** general attorney at Washington, has been promoted to assistant general solicitor, to succeed Mr. Hedrick. **Seddon G. Boxley,** assistant to general counsel at Washington, has been promoted to general attorney, to succeed Mr. Walker. **H. L. Guin,** chief claim agent, has been promoted to the newly-created position of general claims attorney, with headquarters as before at Washington. **Charles M. Little,** solicitor, has been promoted to the newly-created position of assistant to general solicitor, with headquarters as before at Washington. **Charles R. Miller,** assistant auditor of construction, has been promoted to auditor of construction, with headquarters as before at Washington, succeeding **William T. Pollard,** who has retired after more than 40 years of service.

## OPERATING

**J. R. Holden,** trainmaster of the St. Louis Southwestern, with headquarters at Pine Bluff, Ark., has been promoted to assistant superintendent of the road's Northern division, succeeding **W. V. Keith,** whose promotion to assistant general superintendent at Tyler, Tex., was reported in the *Railway Age* of November 2, 1946. **J. T. Hall,** acting assistant trainmaster at Pine Bluff, has been promoted to trainmaster there, and **J. A. Kitchens** has been appointed trainmaster at Illmo, Mo.

**Carl D. Love,** whose promotion to assistant general manager of the Louisville & Nashville, with headquarters at Louisville, Ky., was reported in the *Railway Age* of November 9, 1946, was born at Knoxville, Tenn., and began his railroad career there in 1909 in the road's mechanical department. Mr. Love's continuous service with the L. & N. dates from 1918 when he became a machinist at Covington, Ky. He was later night assistant roundhouse foreman there and day assistant roundhouse foreman at DeCoursey, Ky. He was promoted to assistant master mechanic at the latter point in 1925, and in 1931 was advanced to master mechanic at Radnor, Tenn. Mr. Love was appointed superintendent of the Louisville

**Carl D. Love**

division in 1941, the position from which he was furloughed to military service. As commanding officer of the 728th Railway Operating Battalion with the rank of lieutenant colonel, he served in the Cherbourg area of France and at Fuerth, Germany, receiving the Legion of Merit and the Croix de Guerre with Palm for "exceptionally meritorious conduct in the performance of outstanding services." He was advanced to the rank of colonel in the U. S. Army Officers' Reserve on March 6, 1946. On August 1, 1945, following his separation from the Army, Mr. Love was appointed general superintendent, a newly created position. He held this title at the time of his recent promotion.

**Herman H. Larson,** general manager of the Eastern district of the Union Pacific, with headquarters at Omaha, Neb., will retire on February 1, after 46 years of railroad service.

**W. W. Young,** secretary to executive vice-president of the Chesapeake & Ohio, has been appointed superintendent of terminals, with headquarters at Chicago, succeeding **K. M. Robertson,** promoted.

**J. A. Lloyd** has been appointed assistant division superintendent of the Chicago, Burlington & Quincy, with headquarters at Centerville, Iowa. The position of super-

intendent at Centerville has been abolished, and the jurisdiction of **A. E. Stoll,** superintendent of the Hannibal division, has been extended to include the Centerville division.

**W. H. Jones,** acting superintendent of the Panhandle & Santa Fe (part of the Atchison, Topeka & Santa Fe system), with headquarters at Slaton, Tex., has been appointed superintendent of that division.

**P. H. Jenner,** road foreman of engines of the Western Pacific, with headquarters at San Francisco, Cal., has been promoted to assistant to general manager, with the same headquarters, succeeding **J. C. Hoover,** who has retired after 45 years of service.

**Dean F. Willey,** vice-president in charge of operating, maintenance and engineering of the New York, New Haven & Hartford at New Haven, Conn., has also been appointed general manager of the New York Connecting at New Haven, succeeding **R. L. Pearson.**

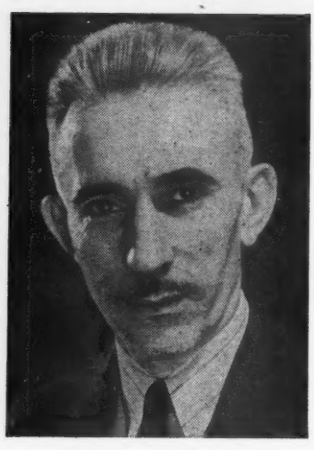
**E. R. McMahon** has been appointed trainmaster of the Illinois Central, with headquarters at Fulton, Ky., succeeding **S. C. Jones,** who has been transferred to Louisville, Ky. Mr. Jones has replaced **S. J. Massey, Jr.,** who has been transferred to McComb, Miss., where he succeeds **H. S. Hardin.** Mr. Hardin has been transferred to Vicksburg, Miss., replacing **J. T. Sisson,** who has been relieved at his own request.

**B. F. Wells,** assistant to vice-president of the Union Pacific, with headquarters at Omaha, Neb., has been appointed general superintendent of the road's Eastern district, with headquarters at Cheyenne, Wyo. **J. F. Lewis,** superintendent of the Colorado division, with headquarters at Denver, Colo., has been appointed chairman of the joint facility committee, with headquarters at Omaha. Mr. Lewis is succeeded by **W. C. Satterfield,** assistant superintendent at Denver.

**F. J. Freese,** whose retirement as superintendent of terminals of the Chicago & Eastern Illinois, with headquarters at Chicago, was reported in the *Railway Age* of December 14, 1946, was born on July 23, 1873, in Germany, and entered railroad service in 1892 as a night caller for the C. & E. I. at Danville, Ill. He subsequently served as yard clerk, yard conductor, road conductor, assistant yardmaster, general yardmaster and assistant trainmaster. In 1911 he was advanced to trainmaster at Danville, which position he held until 1930 when he was promoted to assistant superintendent at St. Louis, Mo. Mr. Freese had served as superintendent of terminals at Chicago since 1938.

**D. S. Thomson,** general superintendent of the Ontario district of the Canadian Pacific at Toronto, Ont., has been promoted to assistant general manager, Eastern lines, with the same headquarters. **J. R. Kimpton,** general superintendent of the Quebec district, with headquarters at Montreal, Que., has been transferred to the Ontario district at Toronto, to succeed Mr. Thomson. **W. F. Tully,** superintendent of the Montreal terminals division, has been appointed general superintendent of the Quebec district at Montreal, to succeed Mr. Kimpton. **J. N. Fraine,** assistant superintendent of the Bruce division at Toronto, has been promoted to superintendent of the Laurentian division at Montreal, succeeding **W. F. Koehn,** who has been appointed superintendent of the Montreal terminals division.

**John L. Niesse,** assistant general superintendent telegraph and telephone of the New York Central system, has been promoted to general superintendent of communications, with headquarters as before at New York. Mr. Niesse was born on January 24, 1895, and received his B. S. E. E. degree from Purdue University in 1916 and his E. E. degree in 1920. He began his career in June, 1916, as engineer with the Western Union Telegraph Company at New York, subsequently going with the Western Electric Company at Chicago as engineer in the installation department, and then with the Michigan Bell Telephone Company, Detroit, Mich., as engineer in the traffic department. From



**John L. Niesse**

May, 1917, to December, 1918, Mr. Niesse served with the U. S. Army, subsequently becoming lieutenant-colonel. From December, 1918, to July, 1922, he was employed by the Cleveland, Cincinnati, Chicago & St. Louis (New York Central system) at Indianapolis, Ind., as telegraph and telephone engineer, then served the New York Central at New York as telegraph and telephone engineer from July, 1922, to January, 1926. He was superintendent of telegraph of the Big Four at Indianapolis from January, 1926, to October, 1931, when he became assistant superintendent telegraph of the New York Central system at Detroit, subsequently transferring to Indianapolis. He became assistant general superintendent telegraph and telephones of that system at New York on September 1, 1944, holding that position until January 1, 1945, when he was appointed communications engineer, Association of American Railroads. On July 1, 1945, Mr. Niesse returned to the position of assistant general superintendent telegraph and telephones of the New York Central system at New York, which position he was holding at the time of his recent appointment as general superintendent of communications at New York.

**Wilson A. Jackson,** general superintendent of telegraph and telephone of the New York Central at New York, has retired after 55 years of service with that road. **James D. Roosa,** assistant superintendent property protection, has been promoted to superintendent of property protection, with jurisdiction over police operations, with headquarters at New York. **John J. Phelan** has been appointed assistant to superintendent of property protection at New York. **Joseph F. Flynn** has been appointed assistant to manager property protection and safety at New York. **George Grebert** has been appointed supervisor of loss and damage prevention at New York. **Edwin G. Overmire** has been appointed assistant supervisor of loss and damage prevention at New York.

**W. E. Robinson,** general superintendent of the Southern Ontario district of the Canadian National, with headquarters at Toronto, Ont., has been appointed assistant general manager of the Central region at Toronto, succeeding **R. C. Johnston,** appointed director of labor relations for the system. **N. A. Walford,** superintendent of the London division at London, Ont., has been appointed general superintendent of the Southern Ontario district at Toronto, succeeding Mr. Robinson. **E. L. Welte,** assistant superintendent at Belleville, has been appointed superintendent of the Stratford division at Stratford, Ont., succeeding **J. A. Murphy,** who has been transferred to the London division, succeeding Mr. Walford. **W. J. Rupert,** supervisor of transportation at Toronto, has been appointed assistant superintendent at Lindsay, Ont., to succeed **A. R. Wilson,** who has been transferred to Belleville, Ont., succeeding Mr. Welte.

## TRAFFIC

**Robert H. Brown** has been appointed general agent—export and import traffic of the Illinois Central, with headquarters at Chicago. This is a newly-created position.

**G. P. LeMoyne** has been appointed division freight and passenger agent of the Atlantic Coast Line, with headquarters at Fort Myers, Fla.

**Joe Hyland,** district passenger agent of the St. Louis-San Francisco, with headquarters at Chicago, has been transferred to Cincinnati, Ohio.

**J. T. Post** has been appointed general agent of the St. Louis Southwestern, with headquarters at Tyler, Tex., succeeding **N. C. Pinkston,** whose death is reported elsewhere in these columns.

**R. T. DuBose,** general freight agent of the Missouri-Kansas-Texas, with headquarters at Dallas, Tex., has been appointed assistant freight traffic manager, a newly-created position.

**E. W. Drewe,** chief of division and tariff bureaus of the Canadian Pacific, with headquarters at Winnipeg, Man., has

been promoted to assistant general freight agent there, succeeding **W. E. Arnold,** who has retired. Mr. Drewe is succeeded by **F. S. Harvey,** assistant chief clerk.

**Theron P. Hinchcliff,** assistant passenger traffic manager of the Chicago, Burlington & Quincy, with headquarters at Chicago, has retired following 48 years of service.

**B. N. Maier,** assistant general freight agent of the Pere Marquette, with headquarters at Chicago, has been promoted to assistant freight traffic manager in charge of solicitation, with headquarters at Detroit, Mich.

**R. L. Milbourne,** general westbound agent of the New York Central, with headquarters at Chicago, has been appointed general agent, freight traffic department, with the same headquarters. He succeeds **George F. Wynn,** whose retirement was reported in the *Railway Age* of January 4.

**Harry G. Cooke,** general agent of the Erie at Akron, Ohio, has been appointed assistant general freight agent at Detroit, Mich., succeeding **W. H. Koch,** deceased. **Donald S. Day** has been appointed division freight agent at Jamestown, N. Y., succeeding **Robert T. Phillips,** who has been appointed general agent at Akron, to succeed Mr. Cooke.

**Thomas H. Irwin** and **John F. Hourigan,** assistant freight traffic managers of the Central of New Jersey, have been appointed freight traffic managers, with headquarters at New York. **Albert L. Postlethwait,** assistant to the general freight agent, has been appointed assistant general agent at Long Branch, N. J.

**William R. Meenach,** assistant foreign freight agent of the Great Northern, with headquarters at Seattle, Wash, has been promoted to foreign freight agent there, succeeding **William R. Dale,** who has retired after 43 years of railroad service. Mr. Meenach is succeeded by **W. E. Murray,** chief clerk to the assistant general freight agent at Portland, Ore.

**S. Shapiro,** assistant general freight agent (rates) of the New York, Chicago & St. Louis, with headquarters at Cleveland, Ohio, has been promoted to general freight agent (rates), with the same headquarters, succeeding **A. E. Pfaff,** promoted. **L. J. Schirmer,** commerce agent, has been appointed assistant general freight agent (rates) at Cleveland, to succeed Mr. Shapiro.

**A. W. Aylin,** assistant traffic manager of the Missouri Pacific, with headquarters at New Orleans, La., has been promoted to foreign freight traffic manager, with headquarters at St. Louis, Mo. He succeeds **G. A. Rodriguez,** who has resigned. Mr. Aylin is succeeded at New Orleans by **G. B. Riggan,** general agent at Seattle, Wash., who in turn is succeeded by **J. S. Rogers. E. J. Rottenstein** has been appointed general agent at San Antonio, Tex., succeeding **B. P. Williams,** who has resigned.

**S. O. Grubbs, Jr.,** general agent of the Kansas City Southern, with headquarters at Fort Smith, Ark., will become assistant executive general agent at New Orleans, La., on January 15. He will be succeeded by **Eldon D. Pence,** chief clerk in the traffic department at Kansas City, Mo. **P. C. Brown,** general agent at Kansas City, has been promoted to division freight agent there, a newly-created position. He is succeeded by **J. T. Garrigues,** who has been in charge of the coal traffic department. **Guy H. Dougherty** has been appointed assistant southern district traffic manager, with headquarters at Shreveport, La.

**William H. Krumm,** general agent of the Missouri-Kansas-Texas, has been promoted to the newly-created position of general freight agent, with headquarters as before at New York. **Fred R. Grimes,** district passenger agent, has been promoted to the newly-created position of assistant general freight agent, with headquarters as before at New York. **Colonel Clarence F. Snyder,** having returned from service with the United States Army, resumes the position of general eastern passenger agent, with headquarters at New York. The positions of general agent—freight department and eastern passenger traffic manager have been abolished.

**M. L. McElheny,** assistant to the chief traffic officer of the Central of New Jersey, with headquarters at New York, has retired after 49 years of railroad service. Mr. McElheny was born at Jamestown, Pa., in 1876, and started his railroading career as an operating agent with the Pennsylvania in 1897. From 1902 to 1934 he was with the Baltimore & Ohio, serving successively as dispatcher, rules examiner, assistant trainmaster, trainmaster and superintendent. He joined the Jersey Central on February 1, 1934, serving successively as superintendent at Jersey City, general superintendent and general manager, before becoming assistant to the chief traffic officer on July 1, 1944.

**Harry F. Doyle,** general agent of the Delaware, Lackawanna & Western, with headquarters at New York, has been promoted to assistant freight traffic manager, with the same headquarters. **Elliott E. Brothers,** division freight agent at Scranton, Pa., has been appointed general agent at New York. **Louis F. Heineck,** general agent at Philadelphia, Pa., has been advanced to division freight agent at Scranton. **Howard A. Whitney,** general agent at Milwaukee, Wis., has been transferred to Philadelphia. **Grover C. Howe,** general agent at Albany, N. Y., has been transferred to Milwaukee. **Ray K. Lovitt,** traffic representative at New York, has been appointed general agent at Albany.

**R. O. Small,** traffic manager—rates and divisions, of the Chicago & North Western, with headquarters at Chicago, has been promoted to general freight traffic manager of the system, with the same headquarters. **T. L. Norton,** assistant traffic manager, has been advanced to traffic manager—sales, succeeding **Allen R. Gould,** who has retired after 46 years of service with the road. Other promotions at Chicago are as follows: **R. C. Stubbs,** assistant traffic manager, to freight traffic manager—sales; **H. A. Gundersen,** general freight agent—rates, to freight traffic manager—rates; **A. O. Olson,** general freight agent—sales, to assistant freight traffic manager—sales; and **E. G. Johnson,** assistant general freight agent—rates, to general freight agent—rates. **George A. Remington,** assistant traffic manager at Omaha, Neb., has been advanced to traffic manager there.

**L. A. Solloway,** general foreign freight agent of the Canadian Pacific in charge of Pacific services, with headquarters at Montreal, Que., has been appointed to the new position of general foreign freight agent with supervision over rates through Atlantic and Pacific ports, with headquarters at Montreal. **K. M. Fetterly,** foreign freight agent at Vancouver, B. C., has been promoted to general foreign freight agent there with general supervision over import and export traffic through the Pacific ports. **C. J. West,** chief clerk to the general foreign freight agent in charge of Atlantic services at Montreal, has been appointed to the newly-created position of assistant foreign freight agent at Montreal. **S. C. Hurkett,** foreign freight agent in charge of rates for Atlantic services at Montreal since 1922, has retired on pension after 46 years of service.

**Carl Jewell,** general agent of the Nashville, Chattanooga & St. Louis, with headquarters at Kansas City, Mo., has been promoted to general freight agent in charge of service and sales, with headquarters at Nashville, Tenn., succeeding **W. H. Wharton,** whose retirement was reported in the *Railway Age* of January 4. Mr. Jewell is succeeded by **John Joslin. J. E. Crymes** has been appointed general agent at Miami, Fla., succeeding **Guyton G. Howell, Jr.,** who has resigned.

Mr. Wharton was born on July 26, 1878, at Nashville and entered railroad service there in 1899 as a stenographer with the N. C. & St. L. The following year he was transferred to Chicago, and in 1903 became soliciting agent there. In 1904 he was advanced to traveling freight agent and in 1907 was promoted to commercial agent. From January, 1918, until April, 1919, Mr. Wharton served as first lieutenant, Ordnance department, United States Army, and in May of the latter year returned to the N. C. & St. L. as special service agent at Nashville. In 1920 he was appointed general northern agent at Chicago, and in 1921 returned to Nashville as assistant general freight agent. In 1939 he was promoted to general freight agent, the position he held at the time of his retirement.

**E. J. Leenhouts,** livestock agent of the New York Central, has been appointed manager of stockyards and agricultural relations and general livestock agent of the system, with headquarters at Rochester, N. Y., succeeding the late **E. H. Anderson,** whose death on December 16, 1946, was reported in the *Railway Age* of December 28, 1946. **R. J. Plaster** has been appointed assistant manager, stockyards and agricultural relations and assistant general livestock agent at Rochester. **O. B. Price**

has been appointed agricultural representative and assistant general livestock agent at Chicago.

Mr. Leenhouts was born at Zeeland, Mich., and was graduated from Hope College, Ferris Institute and the Michigan

E. J. Leenhouts

State College. He joined the agricultural department of the New York Central in 1920 and was successively agricultural agent, general agricultural agent and general agricultural representative and livestock agent, holding the latter position since 1935.

## ENGINEERING & SIGNALING

**John P. Datesman,** drainage engineer of the Chicago & North Western, at Chicago, has been appointed division engineer, with headquarters at Huron, S. D., succeeding **R. D. Anderson,** who has retired.

**W. C. Perkins,** assistant chief engineer of the Union Pacific, at Omaha, Neb., has been appointed chief engineer, with the same headquarters, succeeding **B. H. Prater,** who has been appointed engineering consultant, at Omaha, a newly-created position **L. P. Drew,** bridge engineer, becomes engineer of design and construction in the road's engineering department, with headquarters, as before, at Omaha.

**Arthur W. Carlson,** assistant bridge engineer of the Western Pacific, has been appointed bridge engineer, with headquarters at San Francisco, Cal., succeeding **Col. H. M. Smitten,** who has retired.

**James A. Stocker,** consulting engineer of the New York Central system, with headquarters at Cleveland, Ohio, has retired after more than 44 years of service with that road.

**R. M. Baldock** has been appointed welding engineer of the Norfolk & Western at Roanoke, Va., succeeding **R. P. Winton,** who has been promoted to testing engineer at Roanoke.

**H. M. Schudlich,** chief chemist in the water service department of the Northern Pacific, at Billings, Mont., has been oppointed engineer of water service, with headquarters at St. Paul, Minn., succeeding **E. M. Grime,** who has retired after nearly 40 years of service with the road.

**J. L. Goss** has been appointed chief chemist, water service, to succeed Mr. Schudlich.

**Henry T. Roebuck,** senior assistant engineer of the Baltimore & Ohio at Baltimore, Md., has been appointed office engineer in the engineering department, succeeding **R. E. Kennedy,** appointed real estate agent.

**H. W. Flemming,** chief engineer of the Grand Trunk Western at Detroit, Mich., has been appointed assistant chief engineer of the Canadian National System, with headquarters at Montreal, Que. **A. N. Laird,** bridge engineer, succeeds Mr. Flemming as chief engineer of the Grand Trunk Western, with headquarters as before at Detroit. **A. T. Powell,** office engineer, at Detroit, has been appointed assistant chief engineer, with the same headquarters. **T. H. Jenkins,** chief draftsman, has been appointed bridge engineer, with headquarters as before at Detroit.

**F. J. Halbkat,** whose appointment as communications engineer of the Elgin, Joliet & Eastern, with headquarters at Joliet, Ill., was reported in the *Railway Age* of November 2, 1946, was born on June 22, 1903, at Spring Valley, Minn. He attended Carleton College and the University of Minnesota, taking a civil engineering course. Mr. Halbkat entered railway service in October, 1926, on the E. J. & E., working as draftsman in the chief engineer's office. In March, 1929, he entered the employ of the Detroit Edison Company as estimator in the construction bureau. He returned to the E. J. & E. in October, 1930, as draftsman in the signal department, remaining in that position until September, 1931. Mr. Halbkat resumed his duties as draftsman in the signal department in June, 1936, which position he held at the time of his recent appointment as communications engineer.

**C. B. Cargile,** whose appointment as superintendent of communications and signals of the Florida East Coast, with headquarters at St. Augustine, Fla., was reported in the *Railway Age* of January 4, was born at Stockton, Cal., on January 8, 1886, and entered railroad service on November 1, 1906, as a telegraph lineman on the Southern Pacific, at San Francisco, Cal. On January 1, 1908, he accepted a position as power station electrician with the Yosemite Valley Power Company. He returned to the Southern Pacific as a tower operator in 1911, and was promoted to signal wireman a year later. On January 1, 1914, he was assigned to signal maintenance for a period of seven months, at the termination of which he was promoted to division signal foreman. In August, 1918, he accepted a position as signal wireman on the electrified zone of the Chicago, Milwaukee & St. Paul (now Chicago, Milwaukee, St. Paul & Pacific). Two months later he entered the service of the Great Northern as a signal foreman, was promoted to general signal inspector on January 1, 1919, which position he held until his appointment as signal office engineer on January 1, 1923. In March, 1927, Mr. Cargile resigned from the Great Northern to accept the position of signal supervisor on the Panama railroad in the Canal Zone. In 1929 he was appointed general signal inspector of the Florida East Coast, his title being changed later to signal and electrical inspector. On August 31, 1946, he was appointed acting superintendent of telegraph and signals, the position he held at the time of his recent appointment.

## MECHANICAL

**Paul H. Verd,** whose promotion to superintendent of motive power and equipment of the Elgin, Joliet & Eastern, with headquarters at Joliet, Ill., was reported in the *Railway Age* of December 7, 1946, was born on April 30, 1908, at Arlington, Wash., and graduated from the University of Washington in 1931 with a B. S. degree in electrical engineering. In the summer of 1929 Mr. Verd worked as a surveying party axman for the Sultan Railway & Timber Co., and, while completing his college studies, served part-time as a streetcar operator on the Seattle Municipal Street Railway. He continued in that position until 1933. Also, while employed part-time by a Seattle engineer during 1932, he worked on the development of a method of detecting transverse fissures in rails. In 1933 he became a student engineer in

Paul H. Verd

the employ of the General Electric Company at Schenectady, N. Y., and Erie, Pa., specializing in electric and Diesel-electric motive power. Mr. Verd joined the Electro-Motive Division of General Motors Corporation in 1935 as service engineer (Diesel motive power) at LaGrange, Ill. He became associated with the E. J. & E. in 1937 as supervisor of Diesel locomotives, which position he held until 1941 when he began active duty in the Navy. He was awarded the bronze star for meritorious service in connection with submarine operations against the enemy, and attained the rank of commander prior to his release in September 1945. At that time he returned to the E. J. & E. as master mechanic at Gary, which position he held at the time of his recent promotion.

**George F. Shull,** whose retirement as superintendent of machinery, of the Clinchfield, with headquarters at Erwin, Tenn., was reported in the *Railway Age* of January 4, was born on April 19, 1876, at



*News Department continued on next left-hand page*

*HIGH SPEED FREIGHT DEMANDS EMPHASIZE THE NEED FOR . . .*

# MODERN POWER

**Today's freight demands can only be met through a maximum of operating efficiency . . . operating efficiency that is backed up by MODERN Motive Power, capable of hauling increased loads at higher speeds. Reduced running time means increased availability . . . and increased availability means increased revenues. « Lima-built Modern Steam Locomotives have shown what Modern Steam Power can do to decrease running time and increase availability and freight revenues.**

**LIMA LOCOMOTIVE WORKS** LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

Woodstock, Va., and entered railroad service in 1890 as a messenger boy with the Shenandoah Valley (now Norfolk & Western) at Shenandoah, Va. Mr. Shull served also as call boy and yard clerk, and in 1893 became a machinist apprentice. He joined the Southern in April, 1897, as machinist at Spencer, N. C., and in September of that year went with the Norfolk & Western in that capacity at Roanoke, Va. His subsequent career is as follows: 1901-1902, machinist, Pennsylvania, Altoona, Pa.; 1902-1904, roundhouse foreman, N. & W., Radford, Va.; 1904-1906, foreman, N. & W., West Roanoke, Va., and 1906-1911, assistant erecting shop foreman, N. & W., Roanoke. In 1911 he became associated with the Carolina, Clinchfield & Ohio (now Clinchfield) as general foreman at Erwin, and in 1913 was advanced to master mechanic there. He was promoted to superintendent of motive power in January, 1924, and in December of that year was made superintendent of machinery, the position he held at the time of his retirement.

**Clark W. Milspaugh,** mechanical engineer of the Michigan Central at Detroit, Mich., has retired after more than 37 years of service with that road.

**J. C. Shannon,** assistant master mechanic of the New York Central, with headquarters at Jackson, Mich., has been promoted to master mechanic at Detroit, Mich., succeeding **C. W. Adams,** who has been assigned to other duties. Mr. Shannon is succeeded by **R. S. Gates,** assistant master mechanic at Detroit, who in turn is succeeded by **G. B. Reid.**

**E. V. Myers,** general locomotive foreman of the St. Louis Southwestern of Texas with headquarters at Tyler, Tex., has been promoted to superintendent of motive power, with the same headquarters, succeeding **B. J. Peasley,** who has retired, following 30 years of service with the road. Succeeding Mr. Myers is **T. W. Bellhouse,** assistant general locomotive foreman.

## PURCHASES AND STORES

**J. L. Hartzell,** general storekeeper of the Western Maryland, with headquarters at Hagerstown, Md., has been appointed acting superintendent of stores at Hagerstown.

**James C. Baker,** senior traveling storekeeper of the Southern at Washington, D. C., has been appointed division storekeeper at Spartanburg, S. C., succeeding **J. Harvey Smith,** who has retired after more than 40 years of railroad service.

**William K. Smallridge,** whose promotion to assistant general storekeeper of the Northern Pacific, with headquarters at St. Paul, Minn., was reported in the *Railway Age* of December 21, 1946, was born on November 29, 1904, at Omaha, Neb., and entered railroad service in 1923 as a messenger in the traffic department at Tacoma, Wash. From 1923 until 1930 Mr. Smallridge held various clerical positions in the operating and accounting departments, and in the latter year was appointed store helper and working foreman in the store department at Tacoma. In 1934 he became locomotive crane engineer and in 1936 was advanced to general foreman. Mr. Smallridge served as assistant district storekeeper at Brainerd, Minn., from February 16, 1942, to July 31, 1943, at which time he was promoted to material supervisor at St. Paul. He held this position at the time of his new appointment.

**Charles A. Nichols,** whose retirement as assistant general storekeeper of the Northern Pacific, with headquarters at St. Paul, Minn., was reported in the *Railway Age* of December 21, 1946, was born on November 15, 1874, at Menomonie, Wis., and entered railroad service in 1897 as baggage and billing clerk of the N. P. at Brainerd, Minn. Mr. Nichols served successively as tonnage clerk, distribution clerk, invoice clerk, stock timekeeper, chief clerk and division storekeeper at the road's Como shops, St. Paul. In 1926 he was advanced to traveling storekeeper, and from 1932 until his retirement, he served continuously as assistant general storekeeper at St. Paul.

## SPECIAL

**J. S. Jeffries** has been appointed manager of hotel properties of the Glacier Park Company (subsidiary of the Great Northern), succeeding **A. A. Aszmann,** who has retired.

**Robert C. Johnston,** assistant general manager of the Central region of the Canadian National, with headquarters at Toronto, Ont., has been appointed director of labor relations for the system, with headquarters at Montreal, Que. A photograph of Mr. Johnston and a sketch of his railroad career were published in the *Railway Age* of April 6, 1946, page 751.

## OBITUARY

**N. C. Pinkston,** general agent of the St. Louis Southwestern, with headquarters at Tyler, Tex., died on December 2, 1946, following an illness of two months.

**J. Gordon Johnson,** vice-president and general manager of the Manistee & Northeastern, with headquarters at Manistee, Mich., died on January 6.

**James L. Burnham,** western traffic manager of the Northern Pacific, with headquarters at Seattle, Wash., died in that city on December 31, 1946, as a result of injuries incurred in a fall. He was 64 years old.

**Grover H. Gibney,** who retired on March 31, 1946, as assistant to general manager of the Pullman Company, following 46 years of service, died on December 29, at St. Luke's Hospital, Chicago, after a lengthy illness.

**Charles E. Ervin,** former vice-president of the Gulf, Mobile & Ohio, whose death on December 16, 1946, at St. Louis, Mo., was reported in the *Railway Age* of December 21, was born on July 26, 1880. Mr. Ervin entered railroad service in 1896 as a messenger for the Atchison, Topeka & Santa Fe at Kansas City, Mo., and subsequently served there as yard clerk and assistant chief yard clerk. In 1900 he joined the Southern at Sheffield, Ala., as a clerk, and from 1901 to 1911 he served successively as machinist's helper, chief clerk to roadmaster, track supervisor and assistant engineer of the road's Northern district. His subsequent career was as follows: 1912-1917, roadmaster, Southern, Atlanta (Ga.) division; 1917-1920, superintendent, Southern, Atlanta division; 1920-1925, general superintendent, Mobile & Ohio (now G. M. & O.), St. Louis, Mo.; 1925-1932, general manager, M. & O., St. Louis. In 1932 he was appointed chief operating officer of the M. & O., and the following year was appointed receiver of the road. Upon formation of the G. M. & O. system in 1940 through consolidation of the M. & O., and Gulf, Mobile & Northern, Mr. Ervin was elected a vice-president, the position from which he retired in 1945.

**Calvin A. Frey,** vice-president in charge of traffic of the Railway Express Agency at New York, died on January 1 at Misericordia hospital at the age of 59. Mr. Frey was born at Sidney, Ohio, and had been in the express business for more than 42 years. He first worked for the United States Express Company in Ottawa, Ohio, subsequently going with the Pacific Express Company and the Wells Fargo & Co. express, becoming assistant traffic manager at New York in 1917. When various independent companies merged into the American Railway Express in 1918, he continued in the same post. During World War I he acted as assistant to the

**Calvin A. Frey**

manager of the express and mail section of the United States Railroad Administration. Following the war he resumed his position as assistant traffic manager with the American Railway Express, (renamed the Railway Express Agency in 1929. From 1920 to 1929 he was in charge of general and formal express rate cases before the Interstate Commerce Commission. He was appointed assistant to the vice-president in charge of traffic in 1929, becoming vice-president in 1936. Mr. Frey was a member of the New York State Chamber of Commerce and the New York Traffic Club. He was also a vice-president of Railway Express Motor Transport, Inc.

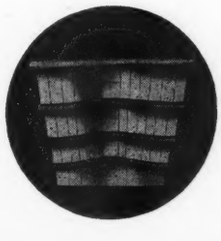


*Table of Revenues and Expenses appears on next left-hand page*

When a locomotive requires undue forcing to do its regular job, it may be because it is not getting all the power it should from the coal consumed.

The maintenance, at all times, of a complete brick arch in the firebox is always an essential in securing proper engine performance. And the heavier the train and the higher the speed, the greater are the gains from keeping the arch complete.

**HARBISON-WALKER REFRACTORIES CO.**
*Refractories Specialists*



**AMERICAN ARCH CO. INC.**
**60 East 42nd Street, New York 17, N. Y.**
*Locomotive Combustion Specialists*

# REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR—1946

| Name of road | | Av. mileage operated during period | Operating revenues: Freight | Passenger | Total (inc. misc.) | Operating expenses: Maintenance of Way and structures | Maintenance of Equipment | Traffic | Transportation | Total | Operating ratio | Net from railway operation | Railway tax accruals | Net railway operating income 1946 | 1945 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Akron, Canton & Youngstown | Nov. | 171 | $367,587 | $166 | $385,850 | $75,139 | $39,564 | $22,602 | $129,164 | $284,904 | 73.8 | $100,946 | $36,777 | $41,878 | $41,227 |
| | 11 mos | 171 | 3,637,146 | 1,343 | 3,836,327 | 695,930 | 457,931 | 256,280 | 1,341,286 | 2,969,994 | 77.4 | 866,333 | 302,407 | 359,553 | 401,305 |
| Alton | Nov. | 959 | 1,578,261 | 407,269 | 2,292,748 | 517,818 | 228,256 | 83,543 | 886,202 | 1,863,629 | 81.3 | 429,119 | 155,696 | 114,000 | 268,895 |
| | 11 mos. | 959 | 16,283,951 | 6,730,998 | 26,407,512 | 5,821,727 | 4,539,362 | 876,128 | 11,281,116 | 24,391,545 | 92.4 | 2,015,967 | 1,906,683 | —1,765,054 | 3,522,931 |
| Atchison, Topeka & Santa Fe System | Nov. | 13,084 | 25,979,033 | 4,590,091 | 33,838,434 | 5,497,775 | 6,936,133 | 739,649 | 12,796,327 | 27,512,106 | 81.3 | 6,326,328 | 3,543,614 | 2,945,896 | 2,787,228 |
| | 11 mos. | 13,084 | 272,418,849 | 70,523,454 | 374,572,242 | 56,788,173 | 73,134,124 | 8,113,276 | 135,808,412 | 286,116,452 | 76.4 | 88,455,790 | 47,449,844 | 41,284,430 | 34,899,702 |
| Atlanta & West Point | Nov. | 93 | 244,087 | 50,161 | 335,152 | 48,677 | 72,616 | 12,824 | 180,105 | 335,640 | 100.1 | —488 | —14,412 | —7,791 | 25,010 |
| | 11 mos. | 93 | 2,366,216 | 917,669 | 3,676,294 | 477,348 | 656,112 | 135,020 | 1,866,499 | 3,362,087 | 91.5 | 314,207 | —50,530 | 134,006 | 276,619 |
| Western of Alabama | Nov. | 133 | 234,635 | 52,318 | 318,362 | 66,059 | 83,702 | 12,252 | 144,937 | 325,623 | 102.3 | —7,261 | —24,364 | 20,807 | 35,087 |
| | 11 mos. | 133 | 2,280,276 | 919,269 | 3,510,455 | 555,851 | 742,484 | 130,350 | 1,551,520 | 3,185,838 | 90.8 | 324,617 | 60,732 | 285,566 | 334,086 |
| Atlantic Coast Line | Nov. | 5,571 | 8,023,563 | 2,291,094 | 11,027,781 | 1,984,366 | 1,874,145 | 255,785 | 4,554,658 | 9,140,975 | 82.9 | 1,886,806 | —250,000 | 2,010,069 | 734,319 |
| | 11 mos | 5,570 | 80,809,652 | 25,793,475 | 114,297,605 | 27,605,004 | 19,818,956 | 2,754,724 | 48,784,856 | 104,147,803 | 91.1 | 10,149,802 | 4,400,000 | 3,026,858 | 7,045,695 |
| Charleston & Western Carolina | Nov. | 343 | 285,290 | 10,291 | 304,736 | 56,994 | 65,894 | 11,884 | 132,663 | 275,609 | 90.4 | 29,127 | 15,000 | 10,684 | 5,168 |
| | 11 mos. | 343 | 3,207,732 | 106,147 | 3,407,831 | 783,844 | 748,707 | 134,667 | 1,487,173 | 3,244,107 | 95.2 | 163,724 | 215,000 | —80,499 | 301,020 |
| Baltimore & Ohio | Nov. | 6,193 | 22,792,340 | 2,398,934 | 26,595,581 | 3,757,775 | 6,508,326 | 635,763 | 11,624,793 | 23,724,130 | 89.2 | 2,871,451 | 1,624,479 | 823,571 | 4,303,756 |
| | 11 mos. | 6,148 | 230,380,300 | 33,510,432 | 279,382,571 | 41,307,908 | 67,258,862 | 6,831,933 | 123,279,946 | 252,232,012 | 90.3 | 27,150,559 | 17,857,699 | 5,021,264 | 39,844,053 |
| Staten Island Rapid Transit | Nov. | 29 | 207,686 | 103,396 | 325,546 | 44,349 | 46,618 | 1,360 | 151,244 | 266,534 | 81.9 | 59,012 | 38,741 | —227 | —14,254 |
| | 11 mos. | 29 | 1,845,561 | 1,281,910 | 3,259,587 | 534,980 | 412,550 | 16,624 | 1,708,757 | 2,932,692 | 90.0 | 326,895 | 404,362 | —301,071 | 705,422 |
| Bangor & Aroostook | Nov. | 602 | 798,105 | 51,790 | 879,416 | 156,376 | 189,794 | 7,103 | 321,376 | 716,644 | 81.5 | 162,772 | 86,028 | 77,267 | 156,993 |
| | 11 mos. | 602 | 8,412,826 | 630,097 | 9,328,506 | 2,356,216 | 2,225,319 | 81,366 | 3,085,581 | 8,175,674 | 87.6 | 1,152,832 | 728,295 | 557,500 | 1,164,325 |
| Bessemer & Lake Erie | Nov. | 214 | 1,685,093 | 1,442 | 1,700,576 | 138,235 | 405,550 | 15,721 | 402,663 | 1,014,208 | 59.6 | 686,368 | 367,048 | 573,546 | 407,498 |
| | 11 mos. | 214 | 14,872,543 | 19,430 | 15,055,568 | 1,563,045 | 4,550,049 | 170,951 | 3,897,845 | 10,692,870 | 71.0 | 4,362,698 | 2,721,695 | 4,277,207 | 3,567,167 |
| Boston & Maine | Nov. | 1,762 | 4,971,043 | 1,291,371 | 6,777,907 | 1,029,371 | 1,062,496 | 78,170 | 2,815,397 | 5,244,077 | 77.4 | 1,533,830 | 385,098 | 826,493 | 346,061 |
| | 11 mos. | 1,763 | 49,087,365 | 15,558,455 | 70,684,095 | 11,796,045 | 11,769,732 | 1,053,181 | 31,115,392 | 58,767,986 | 83.1 | 11,916,109 | 5,047,623 | 3,709,533 | 6,993,615 |
| Burlington-Rock Island | Nov. | 228 | 146,383 | 69,117 | 236,603 | 44,922 | 34,407 | 4,108 | 98,082 | 198,332 | 83.8 | 38,271 | 8,185 | —4,022 | 18,130 |
| | 11 mos. | 228 | 1,956,120 | 749,478 | 2,924,870 | 492,303 | 356,722 | 44,359 | 1,232,592 | 2,316,549 | 79.2 | 608,321 | 104,781 | 32,021 | 448,633 |
| Cambria & Indiana | Nov. | 35 | 85,888 | ..... | 85,972 | 18,100 | 45,638 | 624 | 16,124 | 87,416 | 101.68 | —1,444 | 33,965 | 49,836 | 51,257 |
| | 11 mos. | 35 | 1,250,726 | ..... | 1,251,479 | 144,249 | 528,924 | 7,282 | 204,228 | 966,928 | 77.26 | 284,551 | 543,030 | 639,141 | 540,235 |
| Canadian Pacific Lines in Maine | Nov. | 234 | 281,016 | 33,951 | 330,778 | 159,629 | 60,403 | 9,194 | 143,792 | 383,848 | 116.0 | —53,070 | 22,320 | —125,449 | 5,324 |
| | 11 mos. | 234 | 3,422,330 | 668,553 | 4,416,443 | 1,017,640 | 693,310 | 97,265 | 1,798,656 | 3,736,889 | 84.6 | 679,554 | 245,863 | —280,843 | 1,056,312 |
| Canadian Pacific Lines in Vermont | Nov. | 90 | 111,133 | 17,519 | 147,274 | 29,895 | 28,255 | 3,318 | 124,976 | 192,552 | 130.7 | —45,278 | 13,144 | —98,809 | —112,104 |
| | 11 mos. | 90 | 1,132,518 | 219,544 | 1,566,601 | 454,912 | 343,339 | 35,209 | 1,337,516 | 2,234,085 | 142.6 | —667,484 | 123,696 | —1,229,419 | —1,130,035 |
| Central of Georgia | Nov. | 1,815 | 2,119,803 | 257,283 | 2,603,291 | 414,249 | 436,066 | 94,197 | 1,296,936 | 2,392,167 | 91.9 | 211,124 | —87,846 | 320,341 | 535,810 |
| | 11 mos. | 1,815 | 22,107,258 | 4,249,936 | 29,057,899 | 4,804,238 | 5,030,507 | 1,027,279 | 14,459,252 | 27,025,089 | 93.0 | 2,032,810 | 1,062,315 | 1,198,758 | 4,808,893 |
| Central of New Jersey | Nov. | 419 | 2,151,826 | 439,326 | 2,786,022 | 373,017 | 534,270 | 7,320 | 1,476,137 | 2,582,228 | 92.7 | 203,794 | 398,783 | —479,259 | —759,291 |
| | 11 mos. | 565 | 30,765,021 | 5,957,007 | 39,190,636 | 5,058,967 | 7,585,769 | 646,302 | 20,074,322 | 35,304,102 | 90.1 | 3,886,534 | 4,378,918 | —2,483,144 | 4,062,370 |
| Central of Pennsylvania | Nov. | 213 | 1,315,080 | 18,447 | 1,351,290 | 139,141 | 276,358 | 20,069 | 448,640 | 919,062 | 68.0 | 432,228 | 43,018 | 554,081 | 28,128 |
| | 11 mos. | 82 | 5,119,990 | 77,425 | 5,263,756 | 545,442 | 1,070,214 | 77,345 | 1,754,337 | 3,582,679 | 68.1 | 1,681,077 | 187,284 | 2,429,347 | 290,951 |
| Central Vermont | Nov. | 422 | 660,966 | 80,000 | 813,450 | 77,983 | 118,937 | 11,209 | 335,000 | 578,705 | 71.1 | 234,745 | 44,565 | 133,995 | 48,571 |
| | 11 mos. | 422 | 5,930,496 | 967,000 | 7,501,378 | 1,208,617 | 1,275,064 | 120,261 | 3,902,682 | 6,880,573 | 91.7 | 620,805 | 486,981 | —451,606 | 83,027 |
| Chesapeake & Ohio | Nov. | 3,106 | 13,448,004 | 878,460 | 15,040,594 | 2,346,852 | 3,256,968 | 351,633 | 5,684,053 | 12,259,638 | 81.5 | 2,780,956 | 1,263,658 | 1,890,761 | 4,762,061 |
| | 11 mos. | 3,095 | 158,334,843 | 12,876,728 | 178,188,573 | 24,423,394 | 32,819,737 | 3,390,503 | 60,411,906 | 127,946,334 | 71.8 | 50,242,239 | 24,250,163 | 30,541,979 | 18,879,077 |
| Chicago & Eastern Illinois | Nov. | 910 | 1,556,601 | 320,414 | 2,077,201 | 332,664 | 496,580 | 82,184 | 985,568 | 2,014,570 | 97.0 | 62,631 | 95,000 | —150,498 | 65,511 |
| | 11 mos. | 910 | 16,249,467 | 4,172,135 | 22,577,503 | 3,725,685 | 4,974,383 | 861,622 | 10,424,296 | 21,255,720 | 94.1 | 1,321,783 | 1,420,000 | —1,449,848 | 2,366,838 |
| Chicago & Illinois Midland | Nov. | 131 | 393,642 | 881 | 422,213 | 88,409 | 144,932 | 22,235 | 145,664 | 428,692 | 101.5 | —6,479 | 7,467 | —22,962 | 71,493 |
| | 11 mos | 131 | 5,243,083 | 10,064 | 5,543,336 | 668,808 | 1,300,841 | 266,103 | 1,763,585 | 4,311,325 | 77.8 | 1,232,011 | 587,345 | 617,492 | 848,592 |
| Chicago & North Western | Nov. | 8,065 | 10,014,253 | 2,204,949 | 13,769,374 | 1,870,191 | 2,458,494 | 257,846 | 6,064,933 | 11,298,909 | 82.1 | 2,470,465 | 651,381 | 1,601,892 | 752,446 |
| | 11 mos. | 8,065 | 100,498,391 | 31,027,775 | 147,665,314 | 23,010,835 | 27,891,005 | 2,881,548 | 64,933,334 | 125,710,392 | 85.1 | 21,954,922 | 9,292,669 | 9,489,762 | 18,746,100 |
| Chicago, Burlington & Quincy | Nov. | 8,868 | 12,945,798 | 1,657,528 | 16,246,812 | 2,442,340 | 2,278,532 | 339,949 | 5,753,322 | 11,429,245 | 70.3 | 4,817,567 | 2,204,061 | 2,278,338 | 1,319,371 |
| | 11 mos. | 8,866 | 136,393,447 | 26,174,201 | 180,254,535 | 28,885,685 | 24,845,398 | 3,718,509 | 62,475,430 | 126,840,216 | 70.4 | 53,414,319 | 24,070,473 | 25,609,543 | 27,402,167 |
| Chicago Great Western | Nov. | 1,500 | 2,233,312 | 93,647 | 2,577,434 | 249,385 | 343,087 | 71,896 | 1,130,687 | 1,875,525 | 72.8 | 701,909 | —2,059 | 485,327 | 234,518 |
| | 11 mos. | 1,500 | 20,496,000 | 1,818,608 | 24,690,807 | 4,086,030 | 3,713,941 | 796,662 | 11,746,159 | 21,233,192 | 86.0 | 3,457,615 | 714,864 | 692,292 | 2,396,687 |
| Chicago, Indianapolis & Louisville | Nov. | 541 | 1,041,782 | 64,564 | 1,167,342 | 172,077 | 202,487 | 54,761 | 504,897 | 1,002,753 | 85.9 | 164,589 | 68,529 | —30,741 | 91,392 |
| | 11 mos. | 541 | 9,285,520 | 535,572 | 10,388,592 | 1,654,583 | 2,034,951 | 438,614 | 4,505,551 | 9,246,312 | 89.0 | 1,142,280 | 698,003 | —460,248 | 1,678,644 |

Table continued on next left-hand page.

# An *Enviable* RECORD

A group of Niagara class 4-8-4 type locomotives in service on the New York Central System, recently made the outstanding average mileage of more than 27,000 in one month.

This high mileage demonstrates the high availability that can be obtained from steam locomotives. Such performances reflect creditably on the designers . . . and the motive power department of the railroad.

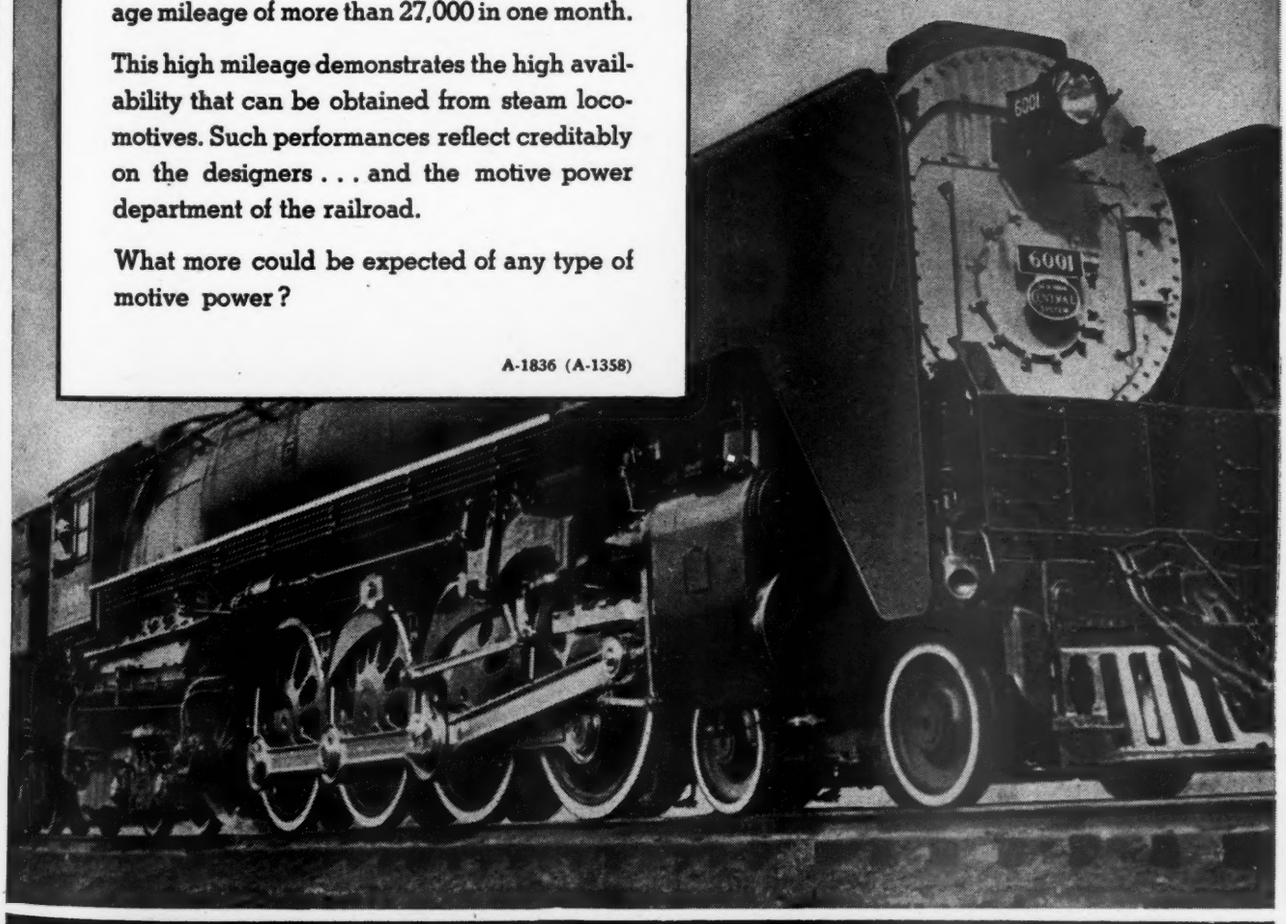
What more could be expected of any type of motive power?

A-1836 (A-1358)

ELESCO

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Ave., CHICAGO
Montreal, Canada, THE SUPERHEATER COMPANY, LTD.



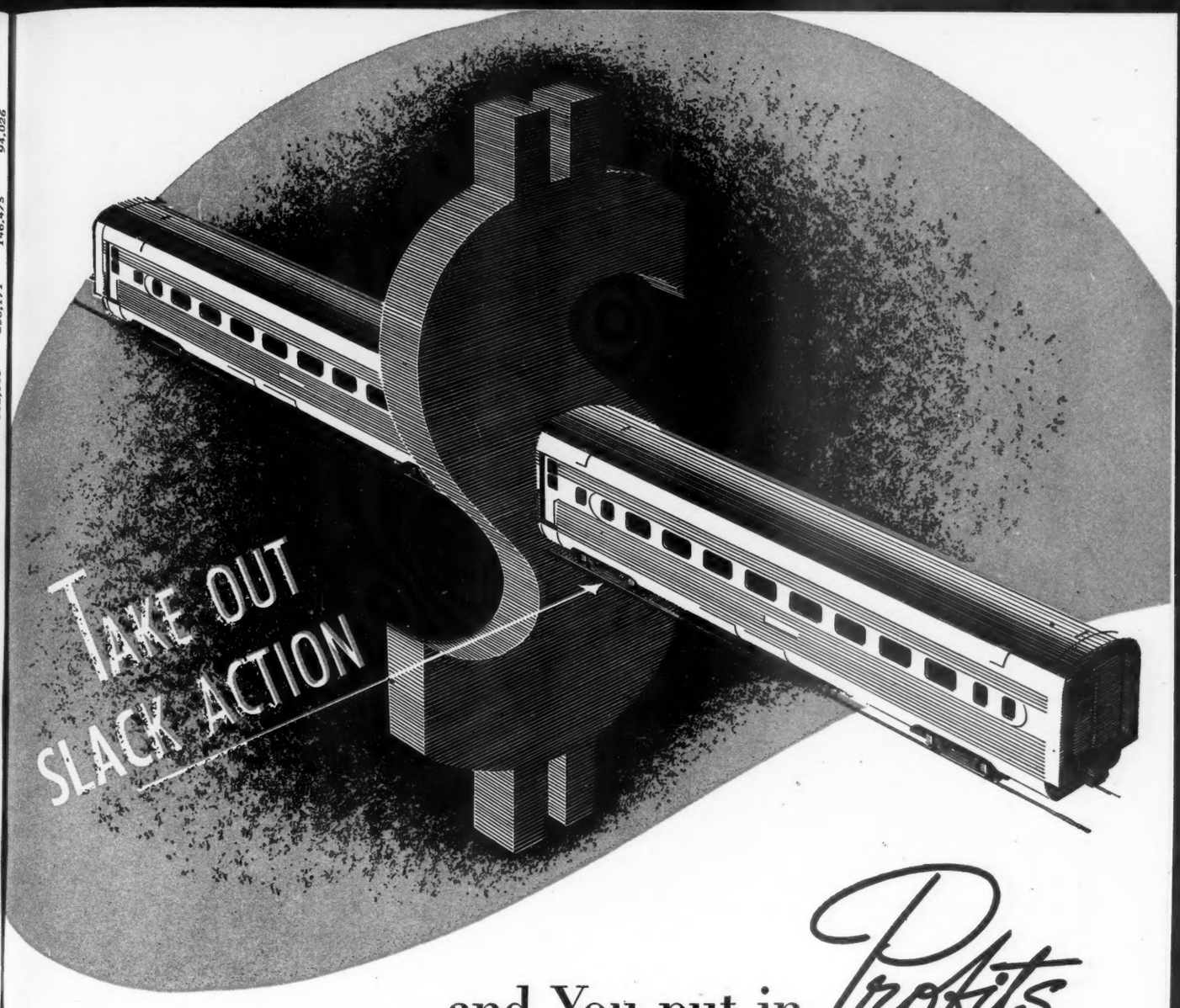

Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • American Throttles

# REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1946—CONTINUED

| Name of road | | Av. mileage operated during period | Operating revenues: Freight | Passenger | Total (inc. misc.) | Operating expenses: Maintenance of Way and structures | Maintenance of Equipment | Traffic | Transportation | Total | Operating ratio | Net from railway operation | Railway tax accruals | Net railway operating income: 1946 | 1945 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chicago, Milwaukee, St. Paul & Pacific | Nov. | 10,733 | $14,640,897 | $1,727,150 | $18,100,154 | $2,254,730 | $2,624,992 | $333,162 | $7,542,135 | $13,590,729 | 75.1 | $4,509,425 | $1,661,000 | $2,416,671 | $1,924,769 |
| | 11 mos. | 10,733 | 138,932,892 | 26,266,990 | 184,141,465 | 31,045,463 | 32,904,179 | 3,677,636 | 81,157,187 | 158,028,801 | 85.8 | 26,112,664 | 9,384,000 | 12,044,618 | 25,674,638 |
| Chicago, Rock Island & Pacific | Nov. | 7,650 | 10,243,414 | 2,049,147 | 13,335,006 | 1,775,990 | 2,193,570 | 357,723 | 5,129,819 | 10,104,067 | 75.8 | 3,230,939 | 1,151,986 | 1,612,549 | 1,645,248 |
| | 11 mos. | 7,652 | 106,586,474 | 27,603,111 | 145,868,333 | 20,726,017 | 24,077,140 | 4,267,957 | 56,127,917 | 112,499,386 | 77.1 | 33,368,947 | 11,080,385 | 15,301,970 | 24,657,169 |
| Chicago, St. Paul, Minn. & Omaha | Nov. | 1,616 | 2,033,605 | 270,047 | 2,526,556 | 285,469 | 330,442 | 51,343 | 1,190,715 | 1,952,359 | 77.3 | 574,197 | —141,613 | 573,524 | 184,680 |
| | 11 mos. | 1,616 | 19,263,936 | 3,219,500 | 24,920,515 | 3,775,268 | 4,032,194 | 529,973 | 12,549,484 | 21,962,599 | 88.1 | 2,957,916 | 1,164,156 | 385,787 | 3,377,129 |
| Clinchfield | Nov. | 302 | 1,117,258 | 5,965 | 1,133,699 | 107,817 | 202,271 | 27,865 | 297,758 | 658,951 | 58.1 | 474,748 | 123,339 | 435,584 | 289,513 |
| | 11 mos. | 302 | 11,919,914 | 90,194 | 12,130,513 | 1,175,952 | 2,059,811 | 289,082 | 3,363,174 | 7,153,060 | 59.0 | 4,977,453 | 1,457,268 | 4,117,262 | 4,590,731 |
| Colorado & Southern | Nov. | 748 | 735,954 | 179,561 | 1,010,653 | 137,275 | 175,808 | 21,098 | 468,152 | 849,804 | 84.1 | 160,849 | 133,105 | —19,863 | 274,925 |
| | 11 mos. | 748 | 7,253,474 | 1,867,128 | 10,140,866 | 1,787,505 | 1,821,219 | 230,432 | 4,419,654 | 8,806,666 | 86.8 | 1,334,200 | 884,939 | 208,614 | 2,320,688 |
| Ft. Worth & Denver City | Nov. | 902 | 740,872 | 146,379 | 978,029 | 221,018 | 149,112 | 31,041 | 388,539 | 853,755 | 87.3 | 124,274 | 50,198 | 39,626 | 227,695 |
| | 11 mos. | 902 | 7,458,720 | 2,429,711 | 10,969,778 | 2,313,087 | 1,781,149 | 346,415 | 4,071,191 | 9,224,523 | 84.1 | 1,745,255 | 605,077 | 770,647 | 2,177,830 |
| Colorado & Wyoming | Nov. | 42 | 87,653 | ..... | 145,478 | 8,966 | 16,714 | 819 | 60,853 | 92,945 | 63.8 | 52,533 | 30,542 | 21,614 | 19,303 |
| | 11 mos. | 42 | 774,448 | ..... | 1,256,736 | 100,014 | 165,786 | 8,664 | 515,135 | 854,583 | 67.9 | 402,153 | 157,999 | 233,155 | 212,963 |
| Columbus & Greenville | Nov. | 168 | 128,106 | 4,301 | 142,356 | 45,188 | 12,682 | 5,364 | 61,339 | 143,201 | 100.6 | —845 | 10,679 | —13,133 | —4,746 |
| | 11 mos. | 168 | 1,386,979 | 59,807 | 1,545,533 | 345,523 | 227,923 | 53,586 | 596,856 | 1,388,086 | 89.8 | 157,447 | 139,819 | 10,438 | 43,823 |
| Delaware & Hudson | Nov. | 795 | 3,693,817 | 150,388 | 3,944,375 | 535,873 | 892,107 | 57,005 | 1,627,837 | 3,250,632 | 82.4 | 693,743 | 335,528 | 330,976 | 400,678 |
| | 11 mos. | 842 | 37,563,204 | 1,958,769 | 40,609,960 | 5,956,345 | 9,145,506 | 620,628 | 17,006,974 | 34,248,583 | 84.3 | 6,361,377 | 2,649,330 | 3,775,272 | 2,672,008 |
| Delaware, Lackawanna & Western | Nov. | 973 | 4,990,643 | 782,028 | 6,306,167 | 710,986 | 997,414 | 124,202 | 2,881,032 | 4,904,369 | 27.1 | 1,401,798 | 518,149 | 756,301 | 559,777 |
| | 11 mos. | 973 | 48,043,400 | 9,485,943 | 63,329,740 | 8,192,916 | 11,010,527 | 1,373,472 | 30,934,827 | 53,753,469 | 30.3 | 9,576,271 | 4,727,571 | 4,173,120 | 4,539,606 |
| Denver & Rio Grande Western | Nov. | 2,366 | 3,538,637 | 283,073 | 4,053,193 | 1,276,080 | 926,242 | 128,665 | 1,718,007 | 4,245,187 | 104.7 | —191,994 | 316,751 | —633,310 | 459,163 |
| | 11 mos. | 2,384 | 37,467,715 | 7,076,945 | 47,015,377 | 6,969,309 | 10,820,956 | 1,302,057 | 18,913,758 | 40,370,364 | 85.9 | 6,645,013 | 3,476,452 | 2,757,950 | —693,296 |
| Denver & Salt Lake | Nov. | 232 | 251,132 | 6,568 | 270,247 | 43,494 | 57,393 | 3,799 | 109,206 | 236,832 | 87.6 | 33,415 | 32,287 | 46,372 | 95,948 |
| | 11 mos. | 232 | 2,948,427 | 80,364 | 3,163,602 | 604,901 | 627,682 | 42,898 | 1,192,978 | 2,624,469 | 82.9 | 539,133 | 356,730 | 664,809 | 916,425 |
| Detroit & Mackinac | Nov. | 230 | 147,247 | 1,152 | 155,844 | 18,942 | 21,420 | 1,018 | 37,495 | 84,040 | 53.9 | 71,804 | —15,005 | 72,932 | 27,039 |
| | 11 mos. | 230 | 1,172,260 | 36,786 | 1,284,214 | 239,633 | 169,784 | 8,762 | 424,529 | 900,402 | 70.1 | 383,812 | 34,745 | 245,240 | 62,950 |
| Detroit & Toledo Shore Line | Nov. | 50 | 367,414 | ..... | 369,992 | 52,355 | 36,470 | 11,295 | 121,627 | 231,007 | 62.4 | 138,985 | 37,607 | 34,321 | 34,800 |
| | 11 mos. | 50 | 3,844,246 | ..... | 3,866,335 | 452,394 | 353,192 | 117,935 | 1,298,140 | 2,324,978 | 60.1 | 1,541,357 | 456,778 | 410,583 | 479,148 |
| Detroit, Toledo & Ironton | Nov. | 464 | 813,416 | 941 | 856,441 | 103,117 | 147,746 | 17,878 | 241,381 | 538,452 | 62.9 | 317,989 | 95,618 | 204,072 | 66,467 |
| | 11 mos. | 464 | 8,584,661 | 12,327 | 9,019,700 | 1,161,396 | 1,690,768 | 193,996 | 2,692,733 | 6,052,025 | 67.1 | 2,967,675 | 912,533 | 1,678,339 | 1,345,332 |
| Duluth, Missabe & Iron Range | Nov. | 547 | 2,853,007 | 3,296 | 3,282,518 | 307,310 | 366,326 | 5,322 | 1,164,983 | 1,891,436 | 57.6 | 1,391,082 | 689,996 | 713,598 | 175,929 |
| | 11 mos. | 546 | 28,492,399 | 46,077 | 33,178,513 | 4,263,183 | 4,208,059 | 65,525 | 8,561,425 | 17,631,762 | 53.1 | 15,546,751 | 6,706,144 | 8,899,786 | 11,208,593 |
| Duluth, Winnipeg & Pacific | Nov. | 175 | 271,000 | 2,700 | 280,600 | 58,645 | 34,703 | 3,061 | 112,793 | 213,866 | 76.2 | 66,734 | 22,157 | 23,055 | 5,851 |
| | 11 mos. | 175 | 2,384,000 | 22,200 | 2,464,600 | 618,438 | 387,321 | 31,368 | 1,125,489 | 2,214,171 | 89.9 | 250,429 | 206,783 | —249,932 | 14,865 |
| Elgin, Joliet & Eastern | Nov. | 391 | 2,258,746 | 2 | 2,682,528 | 144,446 | 399,463 | 20,893 | 1,109,631 | 1,753,015 | 65.3 | 929,513 | 404,180 | 289,939 | 404,409 |
| | 11 mos. | 391 | 19,948,578 | 485 | 24,238,517 | 2,543,841 | 4,599,873 | 224,126 | 10,959,234 | 19,185,203 | 79.2 | 5,053,314 | 2,525,874 | 1,183,913 | 2,784,612 |
| Erie | Nov. | 2,228 | 10,400,360 | 568,693 | 11,719,588 | 1,262,717 | 2,145,004 | 254,580 | 5,244,033 | 9,444,287 | 80.6 | 2,275,301 | 55,840 | 1,603,846 | 784,978 |
| | 11 mos. | 2,240 | 101,119,800 | 8,379,122 | 117,102,803 | 13,066,026 | 22,707,539 | 2,795,899 | 56,192,063 | 100,845,053 | 86.1 | 16,257,750 | 4,605,692 | 5,173,768 | 13,595,326 |
| Florida East Coast | Nov. | 682 | 1,464,748 | 754,373 | 2,399,876 | 343,207 | 360,384 | 59,052 | 863,129 | 1,758,741 | 73.3 | 641,135 | 138,486 | 410,713 | 342,845 |
| | 11 mos. | 682 | 14,642,423 | 7,386,006 | 23,970,353 | 3,610,482 | 4,029,036 | 625,149 | 8,967,197 | 18,756,294 | 78.2 | 5,214,059 | 1,643,575 | 2,518,464 | 4,433,875 |
| Georgia Railroad | Nov. | 328 | 542,412 | 65,550 | 650,728 | 87,776 | 152,387 | 26,512 | 333,887 | 624,637 | 96.0 | 26,091 | 42,624 | —776 | 31,258 |
| | 11 mos. | 328 | 5,724,722 | 926,116 | 7,087,339 | 1,013,195 | 1,486,356 | 279,252 | 3,656,139 | 6,706,455 | 94.6 | 380,884 | 422,038 | 40,739 | 1,758,954 |
| Georgia & Florida | Nov. | 408 | 184,548 | 2,746 | 192,558 | 47,514 | 28,806 | 12,147 | 78,310 | 175,030 | 90.9 | 17,528 | 12,306 | —5,005 | —11,346 |
| | 11 mos. | 408 | 2,099,577 | 35,227 | 2,196,995 | 602,871 | 311,773 | 129,720 | 886,936 | 2,019,555 | 91.9 | 177,440 | 135,546 | —96,507 | —4,910 |
| Grand Trunk Western | Nov. | 972 | 2,893,000 | 251,000 | 3,363,000 | 468,737 | 614,284 | 46,961 | 1,601,911 | 2,852,144 | 84.8 | 510,856 | 215,578 | 148,471 | 262,296 |
| | 11 mos. | 992 | 27,091,000 | 2,599,000 | 31,836,000 | 6,344,793 | 6,422,903 | 505,987 | 16,334,834 | 30,953,529 | 97.2 | 882,471 | 1,762,297 | —2,114,293 | 4,386,602 |
| Canadian Nat'l Lines in New England | Nov. | 172 | 160,000 | 8,500 | 175,000 | 95,290 | 26,549 | 2,352 | 117,330 | 248,404 | 143.1 | —73,404 | 24,814 | —126,368 | —126,153 |
| | 11 mos. | 172 | 1,592,100 | 134,800 | 1,931,500 | 683,871 | 399,159 | 25,441 | 1,197,484 | 2,450,500 | 126.9 | —519,000 | 254,366 | —1,155,377 | —835,498 |
| Great Northern | Nov. | 8,332 | 13,259,240 | 984,958 | 15,395,618 | 2,331,423 | 2,152,080 | 342,881 | 5,422,446 | 10,750,116 | 69.8 | 4,645,502 | 985,245 | 3,550,324 | 2,832 |
| | 11 mos. | 8,332 | 126,588,633 | 14,931,713 | 154,346,171 | 26,904,661 | 27,272,336 | 3,208,718 | 55,771,135 | 118,858,705 | 77.0 | 35,487,466 | 12,425,842 | 21,634,501 | 29,115,484 |
| Green Bay & Western | Nov. | 234 | 239,711 | 460 | 243,692 | 24,593 | 26,028 | 11,902 | 85,700 | 162,084 | 66.5 | 81,608 | 19,867 | 48,302 | 18,394 |
| | 11 mos. | 234 | 2,425,780 | 4,856 | 2,488,843 | 513,301 | 269,409 | 125,735 | 941,315 | 1,976,780 | 79.4 | 512,060 | 253,171 | 146,475 | 94,026 |

Table continued on next left-hand page.




# . . . and You put in *Profits*

**Slack Action!—saboteur of rolling equipment and enemy of passenger comfort—"HSC" Electro-Pneumatic Brake can help you defeat it.**

**"HSC" Electro-Pneumatic Brakes embody electric control for simultaneous, uniform application and release of brake force on every car in the train. Each brake does its equally proportional share of retarding—all working in harmony to stop trains smoothly and quickly. Definite by-product of this simultaneous and uniform brake action, is the disappearance of slack action. And, when slack action vanishes, passenger comfort mounts and maintenance costs go down. Both are factors in profitable railroading.**

**Specify this Westinghouse trio for Passenger Service:**

***"HSC" Electro-Pneumatic Brakes*** **. . . for braking flexibility to match modern train speeds, and unequalled smooth action**

***Speed Governor Control*** **. . . for regulating brake forces to wheel speeds**

***"AP" Decelostat*** **. . . for wheel slip detection to keep the wheels rolling**

*Brakes are Basic to Railroad Progress*

## Westinghouse Air Brake Co.

WILMERDING, PA.

| | | |

# REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1946—CONTINUED

| Name of road | | Av. mileage operated during period | Operating revenues: Freight | Passenger | Total (inc. misc.) | Operating expenses: Maintenance of Way and structures | Maintenance of Equipment | Traffic | Transportation | Total | Operating ratio | Net from railway operation | Railway tax accruals | Net railway operating income 1946 | 1945 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gulf, Mobile & Ohio | Nov. | 1,945 | $2,771,330 | $102,135 | $2,974,691 | $538,531 | $511,556 | $115,002 | $965,914 | $2,295,267 | 77.2 | $679,424 | $304,532 | $275,775 | —$239,964 |
| | 11 mos. | 1,945 | 29,125,035 | 1,645,620 | 31,852,538 | 6,243,858 | 5,912,187 | 1,156,001 | 11,278,258 | 26,215,165 | 82.3 | 5,637,373 | 2,440,227 | 1,526,128 | 2,781,499 |
| Illinois Central (System) | Nov. | 6,582 | 15,312,112 | 2,509,555 | 19,138,026 | 3,069,743 | 3,111,492 | 324,984 | 6,816,453 | 14,144,003 | 73.9 | 4,994,023 | 2,475,834 | 2,253,751 | 1,361,076 |
| | 11 mos. | 6,594 | 150,331,406 | 28,676,284 | 192,083,239 | 34,176,018 | 33,256,394 | 3,585,942 | 73,416,978 | 154,182,465 | 80.3 | 37,900,774 | 20,262,798 | 15,375,960 | 24,713,233 |
| Illinois Terminal | Nov. | 476 | 650,346 | 139,343 | 874,539 | 106,444 | 95,580 | 24,080 | 322,425 | 581,155 | 66.45 | 293,384 | 118,677 | 153,580 | 2,393 |
| | 11 mos. | 476 | 6,245,393 | 1,579,143 | 8,697,734 | 1,269,553 | 1,202,963 | 263,954 | 3,448,648 | 6,539,428 | 75.19 | 2,158,306 | 970,704 | 910,812 | 1,121,634 |
| Kansas City Southern | Nov. | 890 | 2,214,007 | 171,808 | 2,606,202 | 269,185 | 356,480 | 68,480 | 871,402 | 1,672,196 | 64.2 | 934,006 | 315,000 | 487,005 | 757,976 |
| | 11 mos. | 890 | 23,056,071 | 2,382,877 | 27,585,173 | 2,857,593 | 3,747,929 | 763,278 | 9,436,831 | 18,052,109 | 65.4 | 9,533,064 | 3,190,000 | 4,877,295 | 6,129,655 |
| Kansas, Oklahoma & Gulf | Nov. | 328 | 312,662 | 1,505 | 317,221 | 36,365 | 30,700 | 13,908 | 90,909 | 186,233 | 58.7 | 130,988 | 40,074 | 59,635 | 63,138 |
| | 11 mos. | 328 | 3,369,199 | 17,006 | 3,421,166 | 507,933 | 278,364 | 145,476 | 962,238 | 2,048,528 | 59.9 | 1,372,638 | 465,089 | 622,246 | 838,779 |
| Lake Superior & Ishpeming | Nov. | 156 | 205,707 | 98 | 258,230 | 28,158 | 33,628 | 945 | 71,909 | 142,655 | 55.2 | 115,575 | 23,777 | 98,397 | 36,751 |
| | 11 mos. | 156 | 1,804,301 | 1,008 | 2,213,221 | 442,652 | 418,743 | 9,493 | 599,370 | 1,561,838 | 70.6 | 651,383 | 340,406 | 377,051 | 755,192 |
| Lehigh & Hudson River | Nov. | 96 | 271,172 | ..... | 271,558 | 46,767 | 32,279 | 6,319 | 93,210 | 185,817 | 68.4 | 85,741 | 25,283 | 33,727 | 13,586 |
| | 11 mos. | 96 | 2,539,526 | ..... | 2,545,067 | 455,037 | 375,789 | 68,911 | 884,393 | 1,864,357 | 73.3 | 680,710 | 275,239 | 217,102 | 238,401 |
| Lehigh & New England | Nov. | 189 | 668,426 | ..... | 672,873 | 74,934 | 91,414 | 9,357 | 196,954 | 396,344 | 58.9 | 276,529 | 119,839 | 158,886 | 85,778 |
| | 11 mos. | 190 | 6,151,357 | ..... | 6,213,160 | 725,055 | 1,059,568 | 108,452 | 2,116,821 | 4,260,118 | 68.6 | 1,953,042 | 923,224 | 1,148,522 | 842,847 |
| Lehigh Valley | Nov. | 1,254 | 5,111,076 | 380,522 | 5,861,419 | 757,619 | 886,720 | 126,320 | 2,723,919 | 4,723,422 | 80.6 | 1,137,997 | 355,706 | 713,827 | 578,104 |
| | 11 mos. | 1,254 | 51,449,095 | 5,666,740 | 61,361,745 | 8,366,002 | 9,090,082 | 1,410,223 | 29,015,057 | 50,424,284 | 82.2 | 10,937,461 | 4,475,402 | 4,876,164 | 4,939,642 |
| Louisiana & Arkansas | Nov. | 756 | 1,063,229 | 58,082 | 1,163,320 | 138,823 | 129,098 | 36,863 | 379,905 | 725,395 | 62.4 | 437,925 | 139,516 | 228,576 | 171,792 |
| | 11 mos. | 756 | 10,835,980 | 973,907 | 12,278,020 | 1,566,542 | 1,583,883 | 405,350 | 4,047,407 | 8,085,258 | 65.9 | 4,192,762 | 1,498,362 | 1,965,323 | 2,356,197 |
| Louisville & Nashville | Nov. | 4,759 | 12,234,476 | 1,457,916 | 14,620,048 | 1,947,192 | 2,926,570 | 258,238 | 6,227,817 | 11,918,171 | 81.5 | 2,701,877 | 1,713,462 | 1,419,517 | 1,618,642 |
| | 11 mos. | 4,759 | 123,811,361 | 22,257,461 | 155,651,086 | 21,838,566 | 32,702,856 | 2,797,172 | 65,379,359 | 128,911,282 | 82.8 | 26,739,804 | 17,101,075 | 14,407,717 | 21,745,165 |
| Maine Central | Nov. | 988 | 1,438,363 | 170,510 | 1,707,902 | 242,268 | 353,850 | 14,109 | 692,561 | 1,361,571 | 80.0 | 346,331 | 129,196 | 169,394 | 111,918 |
| | 11 mos. | 988 | 15,369,374 | 2,470,250 | 18,937,444 | 3,236,901 | 3,474,710 | 173,557 | 7,976,859 | 15,503,438 | 81.9 | 3,434,006 | 1,384,359 | 1,365,882 | 1,583,831 |
| Midland Valley | Nov. | 334 | 132,134 | 16 | 134,335 | 28,460 | 13,188 | 2,789 | 48,220 | 99,110 | 73.8 | 35,225 | 11,620 | 14,042 | 17,025 |
| | 11 mos. | 334 | 1,501,400 | 311 | 1,528,711 | 353,618 | 175,028 | 32,337 | 547,990 | 1,177,364 | 77.0 | 351,347 | 128,587 | 130,831 | 251,453 |
| Minneapolis & St. Louis | Nov. | 1,408 | 1,371,288 | 13,160 | 1,438,217 | 133,792 | 207,902 | 83,717 | 476,156 | 977,967 | 68.0 | 460,250 | 140,611 | 289,309 | —121,603 |
| | 11 mos. | 1,408 | 12,345,861 | 301,949 | 13,227,709 | 2,725,281 | 2,246,503 | 956,474 | 5,086,842 | 11,825,297 | 89.4 | 1,402,412 | 852,427 | 271,943 | 860,004 |
| Minneapolis, St. Paul & S. S. Marie | Nov. | 3,224 | 2,339,368 | 131,026 | 2,643,026 | 397,527 | 399,977 | 48,124 | 1,088,681 | 2,021,345 | 76.5 | 621,681 | 145,926 | 433,576 | 326,255 |
| | 11 mos. | 3,224 | 22,553,910 | 1,631,123 | 26,013,337 | 5,219,489 | 4,406,453 | 523,829 | 11,685,933 | 22,786,510 | 87.6 | 3,226,827 | 1,845,740 | 1,128,881 | 2,897,407 |
| Duluth, South Shore & Atlantic | Nov. | 530 | 347,303 | 13,546 | 387,049 | 77,616 | 63,513 | 14,369 | 160,551 | 325,655 | 84.1 | 61,394 | 21,605 | 33,160 | 15,409 |
| | 11 mos. | 530 | 3,416,149 | 167,509 | 3,863,489 | 831,365 | 711,450 | 150,544 | 1,723,180 | 3,520,843 | 91.1 | 342,646 | 232,377 | 11,124 | 480,846 |
| Spokane International | Nov. | 152 | 136,385 | 2,488 | 148,061 | 19,811 | 23,578 | 3,655 | 48,819 | 102,799 | 69.4 | 45,262 | 2,200 | 30,119 | 22,761 |
| | 11 mos. | 152 | 1,341,691 | 29,124 | 1,460,566 | 297,693 | 189,257 | 35,831 | 511,522 | 1,111,064 | 76.8 | 349,502 | 73,534 | 176,647 | 236,548 |
| Mississippi Central | Nov. | 148 | 150,887 | 291 | 153,900 | 25,725 | 17,670 | 10,130 | 36,794 | 97,811 | 63.6 | 56,089 | 7,799 | 34,117 | —3,633 |
| | 11 mos. | 153 | 1,254,016 | 32,623 | 1,324,131 | 310,857 | 184,427 | 103,916 | 385,101 | 1,062,183 | 80.2 | 261,948 | 80,604 | 56,893 | 211,698 |
| Missouri & Arkansas | Nov. | 365 | 993 | 168 | 1,199 | 7,212 | 3,725 | 1,855 | 5,822 | 22,945 | 1913.7 | —21,746 | 1,351 | —23,938 | —22,222 |
| | 11 mos | 365 | 1,171,788 | 17,951 | 1,269,231 | 357,997 | 202,381 | 69,632 | 542,636 | 1,238,155 | 97.6 | 31,076 | 57,383 | —170,786 | —302,793 |
| Missouri-Illinois | Nov. | 172 | 315,833 | 431 | 319,112 | 78,665 | 31,840 | 5,154 | 90,551 | 213,924 | 67.0 | 105,188 | 45,689 | 46,884 | 31,094 |
| | 11 mos. | 172 | 3,169,829 | 4,911 | 3,200,507 | 550,714 | 375,188 | 54,041 | 934,285 | 1,996,119 | 62.4 | 1,204,388 | 531,419 | 567,383 | 387,697 |
| Missouri-Kansas-Texas Lines | Nov. | 3,253 | 4,068,005 | 415,649 | 4,949,253 | 811,890 | 660,721 | 186,333 | 2,003,966 | 3,910,034 | 79.0 | 1,039,219 | 422,934 | 344,921 | 461,196 |
| | 11 mos. | 3,253 | 43,419,386 | 6,967,392 | 55,399,136 | 9,539,953 | 7,944,216 | 2,116,079 | 22,035,704 | 44,523,790 | 80.4 | 10,875,346 | 4,522,185 | 3,917,098 | 6,423,515 |
| Missouri Pacific | Nov. | 7,037 | 12,074,968 | 1,519,577 | 14,915,468 | 2,304,742 | 2,586,533 | 342,347 | 5,691,527 | 11,529,038 | 77.3 | 3,386,430 | 780,390 | 2,112,210 | 1,963,422 |
| | 11 mos. | 7,072 | 125,213,045 | 19,842,136 | 158,797,336 | 23,990,150 | 28,449,047 | 3,804,364 | 62,573,606 | 125,460,817 | 79.0 | 33,336,519 | 9,280,380 | 17,683,980 | 27,980,433 |
| Gulf Coast Lines | Nov. | 1,734 | 2,553,452 | 106,013 | 2,802,360 | 548,718 | 362,058 | 68,629 | 1,012,720 | 2,096,935 | 74.83 | 705,425 | 112,044 | 332,199 | 444,937 |
| | 11 mos. | 1,734 | 30,505,863 | 1,969,284 | 33,976,741 | 6,288,815 | 3,953,890 | 729,847 | 11,230,258 | 23,287,245 | 68.54 | 10,689,496 | 2,369,765 | 5,575,805 | 4,870,867 |
| International-Great Northern | Nov. | 1,110 | 1,786,409 | 257,055 | 2,297,893 | 459,370 | 371,866 | 45,668 | 1,038,282 | 2,039,173 | 88.7 | 258,720 | 94,723 | 5,964 | 342,507 |
| | 11 mos. | 1,110 | 18,280,606 | 3,517,552 | 24,474,626 | 5,056,415 | 3,943,865 | 469,521 | 10,531,284 | 21,247,907 | 86.8 | 3,226,719 | 1,144,993 | 279,506 | 3,189,069 |
| Monongahela | Nov. | 170 | 507,214 | 1,277 | 511,096 | 66,124 | 51,256 | 789 | 155,617 | 278,233 | 54.4 | 232,863 | 53,671 | 70,994 | 167,146 |
| | 11 mos. | 170 | 5,442,589 | 21,426 | 5,497,004 | 740,842 | 560,439 | 9,487 | 1,672,253 | 3,030,487 | 55.1 | 2,466,517 | 584,730 | 937,531 | 951,387 |

Table continued on next left-hand page.

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Anyone who has been around railroad shops much can easily spot an HSGI casting when it is chucked on a machine. He knows it by the uniform quality and freedom from defects. Even the chips—always the same from casting to casting—say *HSGI* as unmistakably as though the iron were identified by a distinguishing yellow.

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| Valve Packing Rings | Light Weight Valves | Cylinder Snap Rings |
| Valve Bull Rings | Cylinder Liners and Pistons for Diesel Service | Valve Rings, All Shapes |

# REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1946—CONTINUED

| Name of road | | Av. mileage operated during period | Operating revenues: Freight | Passenger | Total (inc. misc.) | Operating expenses: Maintenance of Way and structures | Maintenance of Equipment | Traffic | Transportation | Total | Operating ratio | Net from railway operation | Railway tax accruals | Net railway operating income 1946 | 1945 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Montour | Nov. | 51 | $186,356 | ..... | $187,434 | $17,442 | $55,664 | $957 | $73,056 | $157,782 | 84.2 | $29,652 | $36,810 | $39,105 | $71,473 |
| | 11 mos | 51 | 2,420,309 | ..... | 2,433,950 | 253,333 | 700,747 | 14,014 | 888,909 | 1,954,460 | 80.3 | 479,490 | 416,578 | 447,810 | 629,186 |
| Nashville, Chattanooga & St. Louis | Nov. | 1,053 | 2,008,007 | 209,118 | 2,447,171 | 597,525 | 542,510 | 98,765 | 1,132,684 | 2,469,564 | 100.9 | —22,393 | —558,221 | 508,850 | 52,533 |
| | 11 mos | 1,053 | 20,794,994 | 3,502,808 | 26,638,882 | 5,682,605 | 5,730,368 | 1,050,204 | 12,042,816 | 25,562,180 | 96.0 | 1,076,702 | 446,893 | 563,756 | 3,007,573 |
| New York Central | Nov. | 10,743 | 38,064,337 | 10,321,240 | 53,492,598 | 8,071,531 | 11,778,255 | 836,131 | 25,527,355 | 48,790,050 | 91.2 | 4,702,548 | 2,377,245 | 653,017 | 4,059,787 |
| | 11 mos. | 10,746 | 376,507,987 | 134,222,612 | 565,011,695 | 82,769,210 | 118,876,317 | 9,557,642 | 263,284,086 | 503,287,402 | 89.1 | 61,724,293 | 29,775,489 | 15,580,153 | 50,500,694 |
| Pittsburgh & Lake Erie | Nov. | 229 | 2,486,324 | 85,625 | 2,675,648 | 355,382 | 859,501 | 52,186 | 1,062,446 | 2,466,114 | 92.2 | 209,534 | 507,563 | 335,763 | 325,853 |
| | 11 mos. | 229 | 23,593,112 | 1,044,748 | 25,649,742 | 3,875,719 | 9,073,407 | 587,733 | 11,124,937 | 26,115,246 | 101.8 | —465,504 | 2,968,839 | 2,998,582 | 4,077,535 |
| New York, Chicago & St. Louis | Nov. | 1,687 | 6,459,212 | 127,650 | 6,739,098 | 753,022 | 1,172,253 | 168,254 | 2,675,275 | 5,011,447 | 74.4 | 1,727,651 | 580,785 | 828,180 | 902,100 |
| | 11 mos. | 1,687 | 63,860,315 | 2,401,852 | 67,808,907 | 9,222,394 | 11,598,198 | 1,921,473 | 27,695,790 | 53,022,462 | 78.2 | 14,786,445 | 3,515,030 | 7,866,284 | 12,456,914 |
| New York, New Haven & Hartford | Nov. | 1,838 | 7,171,730 | 4,667,962 | 12,922,828 | 2,057,193 | 1,900,262 | 236,729 | 5,740,700 | 10,829,175 | 85.5 | 2,093,653 | 605,600 | 524,559 | 1,925,999 |
| | 11 mos. | 1,841 | 69,959,894 | 55,946,678 | 136,994,849 | 21,970,367 | 21,166,078 | 2,409,383 | 61,763,326 | 117,127,748 | 85.5 | 19,867,101 | 6,498,100 | 1,150,034 | 17,607,899 |
| New York Connecting | Nov. | 21 | 178,905 | ..... | 184,764 | 70,524 | 12,070 | ..... | 50,576 | 125,473 | 67.9 | 59,291 | 35,990 | 103,107 | 202,943 |
| | 11 mos. | 21 | 1,930,148 | ..... | 19,171,529 | 628,782 | 165,548 | ..... | 646,151 | 1,465,468 | 74.3 | 506,061 | 556,604 | 955,037 | 1,912,332 |
| New York, Ontario & Western | Nov. | 547 | 588,013 | 1,487 | 638,558 | 137,003 | 117,881 | 25,629 | 333,303 | 641,327 | 100.4 | —2,769 | 42,805 | —131,379 | —122,180 |
| | 11 mos. | 547 | 5,839,767 | 160,032 | 6,736,568 | 1,295,051 | 1,263,580 | 278,494 | 3,747,939 | 6,902,486 | 102.5 | —165,918 | 458,276 | —1,490,837 | —1,013,128 |
| New York, Susquehanna & Western | Nov. | 120 | 295,482 | 38,251 | 351,746 | 70,410 | 47,673 | 4,663 | 175,557 | 317,218 | 90.2 | 34,528 | —17,990 | 2,315 | 39,695 |
| | 11 mos. | 120 | 3,167,336 | 442,379 | 3,769,872 | 447,805 | 446,805 | 52,518 | 1,748,939 | 2,897,009 | 76.8 | 872,863 | 271,081 | 45,090 | 571,497 |
| Norfolk & Western | Nov. | 2,130 | 9,014,000 | 612,346 | 9,947,600 | 1,539,233 | 2,147,912 | 212,574 | 3,432,289 | 7,738,433 | 77.8 | 2,209,167 | 2,036,139 | 1,146,217 | 1,809,148 |
| | 11 mos. | 2,158 | 105,973,251 | 10,054,678 | 119,457,220 | 16,399,363 | 24,446,332 | 2,287,837 | 37,239,600 | 84,717,026 | 70.9 | 34,740,194 | 22,817,238 | 20,710,687 | 21,913,148 |
| Norfolk Southern | Nov. | 727 | 655,229 | 5,056 | 676,969 | 160,454 | 73,096 | 40,305 | 274,468 | 584,850 | 86.4 | 92,119 | 41,643 | 5,761 | 22,982 |
| | 11 mos. | 727 | 6,895,060 | 131,037 | 7,265,391 | 1,791,815 | 910,834 | 402,895 | 2,882,571 | 6,377,788 | 87.8 | 887,603 | 453,823 | 19,272 | 486,442 |
| Northern Pacific | Nov. | 6,920 | 10,036,051 | 824,713 | 11,749,729 | 1,722,402 | 2,035,343 | 221,232 | 4,267,295 | 8,821,545 | 75.1 | 2,928,184 | 1,497,293 | 1,884,088 | 2,593,637 |
| | 11 mos. | 6,890 | 91,817,692 | 13,301,055 | 115,819,269 | 19,630,284 | 22,638,367 | 2,366,482 | 44,602,809 | 95,933,827 | 82.8 | 19,885,442 | 11,873,948 | 12,290,931 | 25,215,055 |
| Northwestern Pacific | Nov. | 331 | 440,550 | 11,942 | 476,327 | 150,655 | 63,826 | 3,261 | 238,293 | 480,573 | 100.9 | —4,246 | 33,167 | —70,822 | —75,561 |
| | 11 mos | 331 | 4,294,975 | 88,214 | 4,638,421 | 1,614,235 | 724,221 | 40,031 | 2,376,542 | 4,868,836 | 105.0 | —230,415 | 326,657 | —819,787 | 441,049 |
| Oklahoma City-Ada-Atoka | Nov. | 132 | 67,898 | ..... | 69,211 | 19,808 | 3,621 | 1,313 | 24,523 | 52,357 | 75.6 | 16,854 | 5,320 | —1,743 | 23,968 |
| | 11 mos. | 132 | 816,125 | 28 | 840,359 | 231,732 | 38,394 | 14,145 | 263,066 | 588,778 | 70.1 | 251,581 | 83,260 | 42,721 | 157,149 |
| Pennsylvania | Nov. | 10,121 | 52,344,053 | 14,964,416 | 72,819,903 | 8,057,842 | 15,817,913 | 1,137,339 | 34,894,588 | 62,767,726 | 86.2 | 10,052,177 | 3,687,340 | 5,477,711 | 6,799,464 |
| | 11 mos. | 10,121 | 505,571,110 | 191,710,486 | 755,339,794 | 94,037,329 | 174,162,435 | 14,242,687 | 368,031,081 | 684,080,599 | 90.6 | 71,259,195 | 40,105,605 | 24,653,411 | 101,711,206 |
| Long Island | Nov. | 376 | 1,401,612 | 2,151,520 | 3,809,114 | 455,261 | 593,959 | 22,620 | 1,962,012 | 3,098,180 | 81.3 | 710,934 | 437,591 | —75,771 | —111,306 |
| | 11 mos. | 376 | 12,802,579 | 27,544,345 | 42,583,700 | 4,738,309 | 6,260,704 | 317,027 | 21,402,168 | 33,530,080 | 78.7 | 9,053,620 | 4,822,919 | 884,722 | 3,345,903 |
| Pennsylvania-Reading Seashore Lines | Nov. | 390 | 481,382 | 243,837 | 751,583 | 174,068 | 124,358 | 8,150 | 507,239 | 839,103 | 111.6 | —87,520 | 75,385 | —284,511 | —308,785 |
| | 11 mos. | 390 | 4,872,513 | 5,085,971 | 10,300,245 | 1,862,199 | 1,259,278 | 97,301 | 5,926,631 | 9,428,086 | 91.5 | 872,159 | 832,954 | —1,381,207 | —265,744 |
| Pere Marquette | Nov. | 1,950 | 4,416,797 | 185,454 | 4,863,211 | 594,495 | 867,502 | 120,940 | 2,053,496 | 3,849,144 | 79.1 | 1,014,067 | 339,030 | 477,841 | 359,747 |
| | 11 mos. | 1,950 | 40,916,002 | 2,331,623 | 46,095,253 | 6,887,916 | 8,795,541 | 1,144,378 | 20,338,142 | 39,529,994 | 85.8 | 6,565,259 | 2,965,992 | 2,036,465 | 3,662,770 |
| Pittsburg & Shawmut | Nov. | 97 | 118,150 | ..... | 118,771 | 22,482 | 23,913 | 1,956 | 39,725 | 96,022 | 80.8 | 22,749 | 4,565 | 16,596 | 15,388 |
| | 11 mos. | 97 | 1,547,946 | ..... | 1,557,095 | 380,088 | 279,615 | 28,683 | 494,779 | 1,252,593 | 80.4 | 304,502 | 56,004 | 186,763 | 192,886 |
| Pittsburgh & West Virginia | Nov. | 136 | 427,210 | ..... | 447,358 | 82,826 | 110,152 | 30,472 | 124,434 | 377,352 | 84.3 | 70,006 | 44,138 | 60,305 | 12,160 |
| | 11 mos. | 136 | 4,121,608 | 78 | 4,365,795 | 851,225 | 1,023,642 | 317,194 | 1,360,925 | 3,878,177 | 88.8 | 487,618 | 325,720 | 460,415 | 1,136,891 |
| Pittsburg, Shawmut & Northern | Nov. | 122 | 44,879 | ..... | 46,284 | 12,337 | 12,718 | 1,067 | 21,471 | 54,134 | 117.0 | —7,850 | 4,696 | —18,323 | —20,782 |
| | 11 mos. | 153 | 730,971 | ..... | 745,949 | 168,554 | 144,680 | 11,842 | 335,990 | 747,642 | 100.2 | —1,693 | 57,398 | —153,606 | —152,211 |
| Reading | Nov. | 1,362 | 7,789,829 | 680,410 | 8,915,287 | 1,210,761 | 1,560,385 | 115,295 | 3,586,808 | 6,712,429 | 75.3 | 2,202,858 | 1,167,843 | 1,039,545 | 812,431 |
| | 11 mos. | 1,362 | 79,253,338 | 8,898,781 | 92,535,990 | 14,565,873 | 18,636,101 | 1,172,709 | 39,454,237 | 76,530,242 | 82.7 | 16,005,748 | 8,737,226 | 6,908,374 | 12,148,766 |
| Richmond, Fredricksburg & Potomac | Nov. | 118 | 1,252,276 | 593,701 | 2,009,081 | 266,081 | 290,062 | 15,572 | 845,977 | 1,524,678 | 75.9 | 484,403 | 246,987 | 160,149 | 195,760 |
| | 11 mos. | 118 | 12,856,675 | 9,063,593 | 23,631,651 | 3,062,615 | 3,226,805 | 185,001 | 8,922,774 | 16,586,381 | 70.2 | 7,045,270 | 3,341,199 | 2,596,216 | 1,965,420 |
| Rutland | Nov. | 407 | 329,453 | 39,852 | 432,666 | 66,686 | 80,663 | 12,662 | 223,704 | 398,328 | 92.1 | 34,338 | 27,028 | —24,872 | —71,415 |
| | 11 mos. | 407 | 3,396,020 | 543,623 | 4,696,262 | 730,577 | 912,524 | 140,200 | 2,557,783 | 4,507,271 | 96.0 | 188,991 | 292,987 | —234,090 | —134,556 |
| St. Louis-San Francisco | Nov. | 4,645 | 6,251,490 | 744,290 | 7,632,220 | 976,300 | 1,609,072 | 203,854 | 3,386,748 | 6,532,013 | 85.6 | 1,100,207 | 521,531 | 647,283 | 1,119,060 |
| | 11 mos. | 4,645 | 65,147,698 | 12,006,393 | 84,051,738 | 13,567,667 | 18,142,393 | 2,182,472 | 36,397,771 | 74,314,065 | 88.4 | 9,737,673 | 5,853,153 | 4,666,857 | 14,034,978 |
| St. Louis, San Francisco & Texas | Nov. | 160 | 229,908 | 20,031 | 265,079 | 41,200 | 38,373 | 13,231 | 138,693 | 240,644 | 90.8 | 24,415 | 8,519 | —7,890 | 19,658 |
| | 11 mos. | 160 | 2,815,980 | 237,298 | 3,188,128 | 489,181 | 419,931 | 145,853 | 1,517,483 | 2,667,328 | 83.7 | 520,800 | 145,116 | 84,531 | 314,216 |

Table continued on next left-hand page.



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| | | |

# REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1946—CONTINUED

| Name of road | | Av. mileage operated during period | Operating revenues: Freight | Passenger | Total (inc. misc.) | Operating expenses: Maintenance of Way and structures | Maintenance of Equipment | Traffic | Transportation | Total | Operating ratio | Net from railway operation | Railway tax accruals | Net railway operating income: 1946 | 1945 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| St. Louis Southwestern Lines | Nov. | 1,575 | $4,022,968 | $76,826 | $4,249,506 | $623,281 | $470,159 | $129,276 | $1,354,044 | $2,723,675 | 64.1 | $1,525,831 | $547,175 | $829,892 | —$616,498 |
| | 11 mos. | 1,575 | 39,196,284 | 1,648,343 | 42,376,393 | 7,012,458 | 6,159,789 | 1,325,802 | 13,747,497 | 29,891,910 | 70.5 | 12,484,483 | 4,321,811 | 6,487,157 | 7,183,623 |
| Seaboard Air Line | Nov. | 4,153 | 7,549,562 | 1,304,875 | 9,474,457 | 1,604,992 | 1,592,261 | 273,397 | 3,922,453 | 7,851,445 | 82.9 | 1,623,012 | 591,962 | 652,345 | 1,412,634 |
| | 11 mos. | 4,150 | 76,091,778 | 19,335,028 | 102,337,675 | 17,065,905 | 18,027,738 | 2,923,884 | 41,361,765 | 84,527,040 | 82.6 | 17,810,635 | 5,558,448 | 8,555,935 | 17,362,385 |
| Southern Railway | Nov. | 6,484 | 14,383,071 | 2,107,659 | 17,615,988 | 2,487,404 | 3,262,212 | 307,279 | 7,213,334 | 13,969,679 | 79.3 | 3,646,309 | 1,710,054 | 1,597,361 | 2,132,883 |
| | 11 mos | 6,484 | 150,441,461 | 31,988,382 | 195,192,113 | 30,511,355 | 36,216,775 | 3,425,014 | 79,397,294 | 157,440,711 | 80.7 | 37,751,402 | 17,343,582 | 16,243,198 | 26,533,259 |
| Alabama Great Southern | Nov. | 315 | 997,394 | 151,269 | 1,220,509 | 167,330 | 271,981 | 24,671 | 494,669 | 1,010,107 | 82.7 | 210,402 | 134,331 | 95,527 | 105,357 |
| | 11 mos. | 315 | 10,030,375 | 2,271,075 | 13,138,043 | 2,230,139 | 3,099,611 | 283,461 | 5,172,809 | 11,393,944 | 86.7 | 1,744,099 | 1,169,400 | 512,419 | 1,486,822 |
| Cinn., New Orleans & Texas Pacific | Nov. | 337 | 2,292,077 | 305,772 | 2,732,044 | 285,384 | 630,642 | 45,316 | 880,581 | 1,943,260 | 71.1 | 788,784 | 480,924 | 377,993 | 355,899 |
| | 11 mos. | 337 | 22,020,029 | 3,709,266 | 27,304,872 | 3,342,975 | 6,276,357 | 486,832 | 9,574,814 | 20,722,847 | 75.9 | 6,582,025 | 3,621,065 | 3,509,055 | 3,959,678 |
| Georgia Southern & Florida | Nov. | 397 | 362,207 | 56,427 | 456,738 | 88,870 | 57,161 | 7,000 | 192,144 | 358,820 | 78.6 | 97,918 | 31,470 | 36,264 | 46,936 |
| | 11 mos. | 397 | 3,640,778 | 964,724 | 5,048,358 | 1,003,483 | 753,807 | 69,584 | 2,195,550 | 4,188,814 | 83.0 | 859,544 | 311,331 | 208,147 | 707,536 |
| New Orleans & Northeastern | Nov. | 204 | 703,793 | 103,355 | 851,506 | 116,947 | 105,433 | 13,605 | 264,479 | 533,744 | 62.7 | 317,762 | 142,582 | 139,048 | 54,385 |
| | 11 mos. | 204 | 6,176,823 | 1,267,860 | 7,924,757 | 1,544,947 | 984,418 | 153,066 | 2,563,336 | 5,646,235 | 71.3 | 2,278,522 | 910,234 | 712,798 | 1,050,825 |
| Southern Pacific | Nov. | 8,228 | 23,206,325 | 5,161,312 | 31,096,943 | 4,257,285 | 7,059,028 | 767,522 | 15,212,067 | 29,456,219 | 94.7 | 1,640,724 | —3,068,745 | 3,233,665 | 191,753 |
| | 11 mos. | 8,241 | 255,619,839 | 65,857,427 | 352,868,876 | 51,467,426 | 74,092,744 | 8,029,733 | 157,714,314 | 316,613,312 | 89.7 | 36,255,564 | —2,487,967 | 23,792,278 | 30,425,836 |
| Texas & New Orleans | Nov. | 4,322 | 7,331,630 | 937,561 | 8,851,383 | 1,308,809 | 1,295,220 | 189,039 | 3,538,219 | 6,756,470 | 76.3 | 2,094,913 | —35,598 | 1,718,312 | 966,897 |
| | 11 mos. | 4,322 | 72,456,975 | 14,899,524 | 93,841,188 | 16,583,258 | 15,171,908 | 2,092,199 | 36,351,870 | 75,003,639 | 80.0 | 18,837,549 | 221,659 | 13,816,743 | 13,404,747 |
| Spokane, Portland & Seattle | Nov. | 944 | 1,545,116 | 48,073 | 1,706,435 | 436,001 | 198,603 | 15,796 | 654,705 | 1,379,412 | 80.8 | 327,023 | 24,313 | 247,021 | —668,356 |
| | 11 mos. | 944 | 15,209,380 | 1,037,057 | 17,390,621 | 4,960,773 | 2,129,716 | 182,966 | 6,675,187 | 14,723,297 | 84.7 | 2,667,324 | 350,557 | 1,304,480 | 2,140,379 |
| Tennessee Central | Nov. | 286 | 267,982 | 25,748 | 313,319 | 63,011 | 74,321 | 8,836 | 156,489 | 318,364 | 101.6 | —5,045 | 30,506 | —53,958 | 16,250 |
| | 11 mos. | 286 | 2,930,985 | 190,330 | 3,317,746 | 638,038 | 651,667 | 79,953 | 1,504,908 | 3,043,119 | 91.7 | 274,627 | 297,945 | —209,064 | 271,656 |
| Texas & Pacific | Nov. | 1,873 | 3,616,029 | 508,822 | 4,570,582 | 650,669 | 783,743 | 142,254 | 1,791,662 | 3,660,968 | 80.1 | 909,614 | 226,340 | 508,761 | 918,292 |
| | 11 mos. | 1,873 | 36,891,126 | 9,242,650 | 51,079,978 | 7,685,395 | 7,956,727 | 1,533,119 | 18,235,766 | 38,659,977 | 75.7 | 12,420,001 | 3,812,877 | 6,908,201 | 9,584,728 |
| Texas Mexican | Nov. | 162 | 164,665 | 183 | 190,150 | 21,682 | 20,758 | 4,738 | 63,659 | 122,413 | 64.4 | 67,737 | 3,442 | 52,814 | 19,884 |
| | 11 mos. | 162 | 1,975,037 | 2,952 | 2,239,680 | 475,403 | 260,486 | 52,868 | 684,686 | 1,596,739 | 71.3 | 642,941 | 196,357 | 281,883 | 345,000 |
| Toledo, Peoria & Western | Nov. | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .. | ..... | ..... | ..... | ..... |
| | 11 mos. | ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | .. | ..... | ..... | ..... | ..... |
| Union Pacific System | Nov. | 9,775 | 23,873,529 | 4,257,282 | 31,057,846 | 3,850,850 | 5,427,837 | 728,465 | 12,382,905 | 24,291,003 | 78.2 | 6,766,843 | 3,220,170 | 2,253,241 | 335,045 |
| | 11 mos. | 9,775 | 241,137,791 | 60,367,616 | 331,523,511 | 42,871,577 | 63,539,192 | 7,161,003 | 128,353,362 | 263,109,762 | 79.4 | 68,413,749 | 32,487,607 | 24,435,299 | 31,539,744 |
| Utah | Nov. | 111 | 102,134 | ..... | 102,072 | 26,978 | 43,598 | 624 | 50,661 | 127,637 | 125.0 | —25,565 | 11,355 | —32,315 | 25,706 |
| | 11 mos. | 111 | 1,411,064 | ..... | 1,412,591 | 252,685 | 411,559 | 7,555 | 543,233 | 1,274,343 | 90.2 | 138,248 | 128,870 | 39,555 | 177,169 |
| Virginian | Nov. | 661 | 1,688,670 | 6,685 | 1,750,232 | 255,514 | 592,005 | 31,403 | 514,459 | 1,458,168 | 83.33 | 292,064 | 261,000 | 254,746 | 109,959 |
| | 11 mos. | 661 | 22,004,187 | 84,722 | 22,711,962 | 3,018,909 | 6,482,376 | 349,748 | 5,847,564 | 16,404,208 | 72.2 | 6,307,754 | 3,691,600 | 4,272,716 | 6,554,688 |
| Wabash | Nov. | 2,393 | 6,332,737 | 538,547 | 7,320,688 | 1,044,567 | 1,064,079 | 209,704 | 2,955,753 | 5,583,051 | 76.3 | 1,737,637 | 458,342 | 798,416 | 695,229 |
| | 11 mos. | 2,393 | 61,599,425 | 7,012,154 | 73,325,047 | 11,663,234 | 11,234,019 | 2,279,583 | 31,433,558 | 59,821,531 | 81.6 | 13,503,516 | 3,188,784 | 6,034,922 | 8,221,818 |
| Ann Arbor | Nov. | 294 | 498,187 | 5,872 | 520,734 | 64,639 | 113,665 | 19,582 | 256,961 | 468,938 | 90.1 | 51,796 | 34,566 | 1,793 | 58,239 |
| | 11 mos. | 294 | 5,212,925 | 79,958 | 5,497,975 | 796,826 | 1,099,870 | 213,637 | 2,637,084 | 4,908,391 | 89.3 | 589,584 | 342,568 | 121,852 | 626,100 |
| Western Maryland | Nov. | 839 | 2,463,008 | 15,896 | 2,588,918 | 333,472 | 554,936 | 59,837 | 918,315 | 1,964,915 | 75.9 | 624,003 | 285,000 | 397,136 | 634,157 |
| | 11 mos. | 839 | 27,597,362 | 343,632 | 29,144,904 | 4,014,462 | 5,700,148 | 652,424 | 9,923,819 | 21,514,910 | 73.8 | 7,629,994 | 3,572,000 | 4,585,229 | 5,949,885 |
| Western Pacific | Nov. | 1,195 | 3,577,868 | 219,592 | 3,886,155 | 568,098 | 561,053 | 113,062 | 1,093,565 | 2,502,581 | 64.4 | 1,383,574 | 610,364 | 643,452 | 902,169 |
| | 11 mos. | 1,195 | 32,079,948 | 6,098,314 | 39,531,130 | 5,878,206 | 6,369,221 | 1,266,171 | 14,011,125 | 29,500,027 | 74.6 | 10,031,103 | 4,399,003 | 4,516,337 | 6,504,995 |
| Wheeling & Lake Erie | Nov. | 505 | 1,791,593 | ..... | 1,868,017 | 241,536 | 311,760 | 50,234 | 656,854 | 1,315,858 | 70.4 | 552,159 | 341,987 | 382,914 | 263,382 |
| | 11 mos. | 505 | 18,695,499 | 16 | 19,516,483 | 2,829,783 | 3,619,824 | 548,830 | 7,042,333 | 14,679,020 | 75.2 | 4,837,463 | 3,397,197 | 3,289,234 | 2,664,251 |
| Wisconsin Central | Nov. | 1,051 | 1,711,327 | 66,033 | 1,937,563 | 229,224 | 284,479 | 46,386 | 846,759 | 1,475,729 | 76.2 | 461,834 | —75,980 | 466,553 | —407,561 |
| | 11 mos. | 1,051 | 18,010,553 | 1,024,983 | 20,853,868 | 2,788,939 | 3,185,978 | 519,894 | 9,340,335 | 16,598,025 | 79.6 | 4,255,843 | 324,382 | 2,732,919 | 1,539,381 |